CFD-330

SERVICE MANUAL

E Model

MEGA BASS

Model Name Using Similar Mechanism	CFD-300
Tape Transport Mechanism Type	DECK A: MF-DW87-64 DECK B: MF-300RP-63
Optical Device Name	KSM-210BAN

SPECIFICATIONS

CD player section

System	Compact disc digital audio system
Laser diode properties	Material: GaAlAs Wavelength 780 nm Emission duration: Continuous Laser output: Less than 44.6μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block.
Spindle speed	200 r.p.m. to 500 r.p.m. (CLV)
Error correction	Sony Super Strategy Cross Interleave Read Solomon Code
Number of channels	2
Frequency response	20–20,000 Hz $^{+1}_{-3}$ dB
Wow and flutter	Below measurable limit

Radio section

Frequency range	UHF: 470 – 780 MHz (13 – 62 ch) VHF: 170 – 222 MHz (4 – 12 ch) FM (VHF): 76 – 90 MHz (1 – 3 ch) AM: 530–1605 kHz
Antennas	FM: Telescopic antenna AM: Built-in ferrite bar antenna

Tape recorder section and general

Recording system	4-track 2-channel stereo
Fast winding time	Approx. 2 min. with Sony cassette C60
Frequency response	Total with TYPE I (NORMAL) cassette: 60 – 13,000 Hz
Speaker	Full-range speakers: 10 cm dia., cone type Super woofer: 8 cm dia.
Power output	Full-range speakers: 4W+4W (at 6 ohms, 315 Hz, 10% harmonic distortion) Super woofer: 8W (at 6 ohms, 100 Hz, 10% harmonic distortion)
Input	Mixing microphone input jack (minijack) Sensitivity 2.5 mV For low impedance microphone
Outputs	Headphones jack (stereo minijack) For 16–68 ohms impedance headphones
Power requirements	110, 120, 220, 240 V 50/60 Hz DC 12 V, 8 size D (R20) batteries for CD radio cassette-corder DC 4.5 V, 3 size AA (R6) batteries for clock/timer
Power consumption	AC 33W

— Continued on next page —

使用時は添付資料も参照のこと
Refer to the additional documents.

CD RADIO CASSETTE-CORDER

SONY®

Battery life — Batteries for radio cassette-corder

	Recording	Playback	CD playing
Sony SUM-1 (NS)	approx. 4H	approx. 1H	approx. 45M
Sony Alkaline AM1(N)	approx. 9H	approx. 2.5H	approx. 2.0H

Dimensions — 660 × 228 × 235 mm (w/h/d) (26 × 9 × 9 3/8 inches) incl. projecting parts and controls

Weight — Approx. 8 kg, (Approx. 17 lb 10 oz) incl. batteries

Supplied accessories — AC power cord (1)
AC plug adaptor (1)
Dynamic microphone (1)

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Features

The CFD-330 is a compact disc cassette-corder

Which allows you to

- sing KARAOKE songs with digital echo
- listen to high performance compact discs (CD's)
- play audio cassettes
- listen to the radio
- record discs, cassettes and radio onto cassettes.

The exciting sing-along (KARAOKE) functions

- Adjustable digital echo control function
- Adjustable microphone volume control function
- Dual microphone jacks for a duet
- Sound mode selector for KARAOKE multiplex CD or tape
- Supplied vocal microphone
- Input selector for microphone or musical instrument

High quality sound

- A powerful bass is produced with the Sony MEGA BASS system.
- Digital echo for a deep sound

A high performance, high fidelty CD player with many functions

- Three-inch disc can be played without an adaptor.
- While recording a disc, the CD synchronized starting system makes it possible to start CD playing automatically when the deck is in recording mode.
- Repeat function for playing either the entire disc or a single selection and also for program play or shuffle play.
- Program play for playing selections in the order desired.
- Shuffle play for playing selections repeatedly in random order.
- The beginning of the selections can be scanned for 10 seconds (INTRO SCAN).
- The music calendar includes up to 20 selections.
- The selections can be programmed automatically to fit into a desired duration (AUTO EDIT).

Digital clock timer

CD, radio or a taped program can be recorded and played back at a preset time.

Double cassette deck

Deck B: Auto-reverse recording and playback

Others

High or normal speed tape dubbing

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SECTION 1
SERVICING NOTES

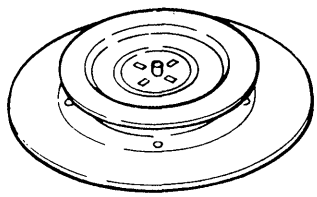
NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

CHUCK PLATE JIG ON REPAIRING

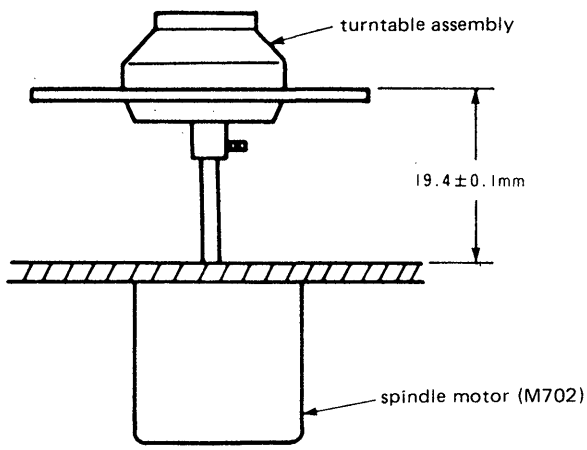
On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

- Code number of Chuck Plate Jig: X-4918-255-1



NOTE ON REPAIRING

The spindle motor (M702) and the turntable assembly are individually supplied as repair parts.
When repairing M702, please order the turntable assembly together.
Dimension is as follows.

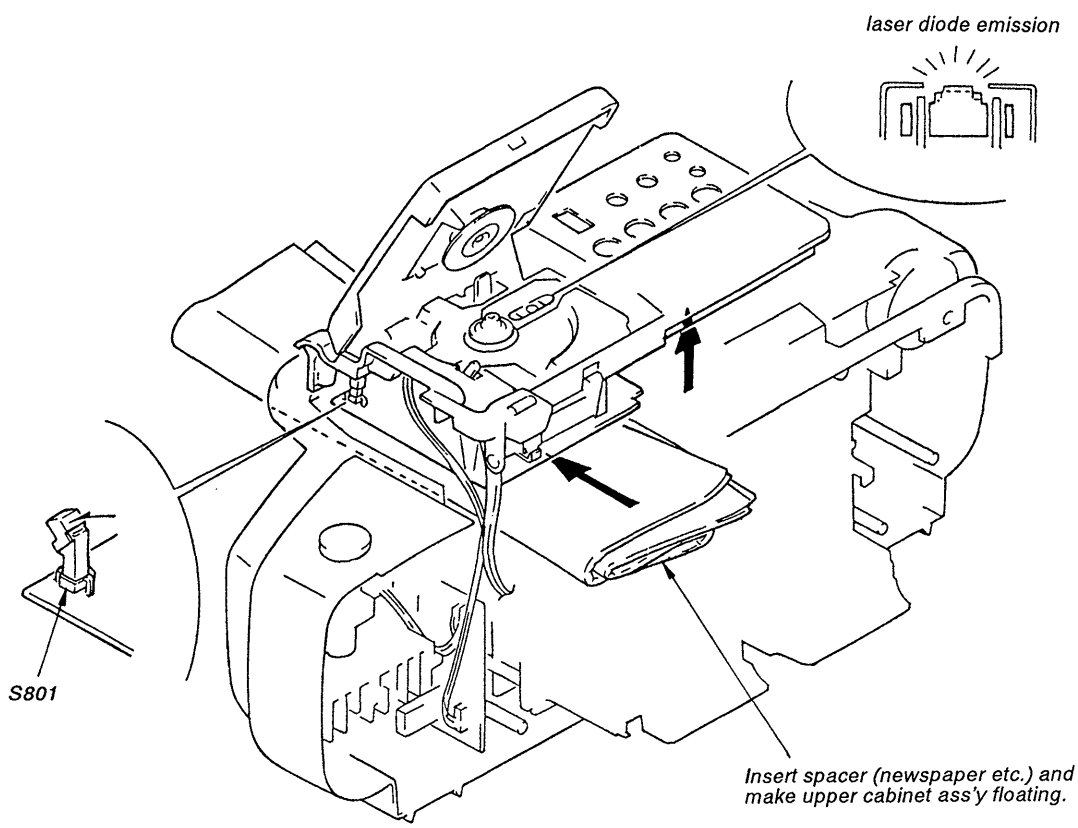


NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Remove front cabinet ass'y and upper cabinet ass'y. (See Section 3 Disassembly.)
2. Make upper cabinet ass'y floationg with spacer (newspaper etc.)
3. Turn POWER switch on with no disc inserted and make Function switch to CD position.
4. Open the lid for CD.
5. Turn on S801 as following figure.
6. Press ▶ key.
7. Confirm the laser diode emission while observing the objecting lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken.
   Objective lens moves up and down once for the focus search.



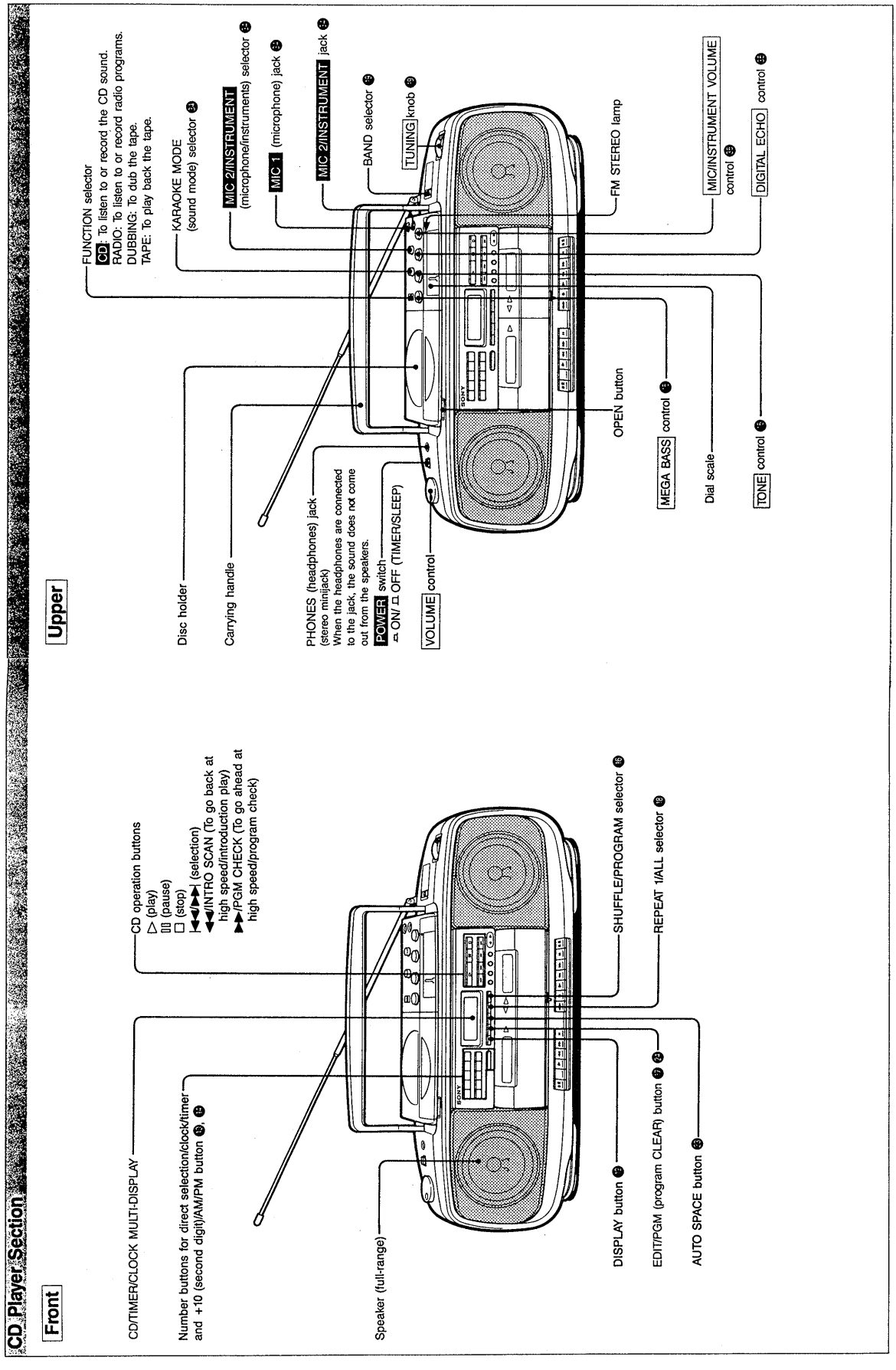
This section is extracted from instruction manual.

SECTION 2
GENERAL

Location and Function of Controls

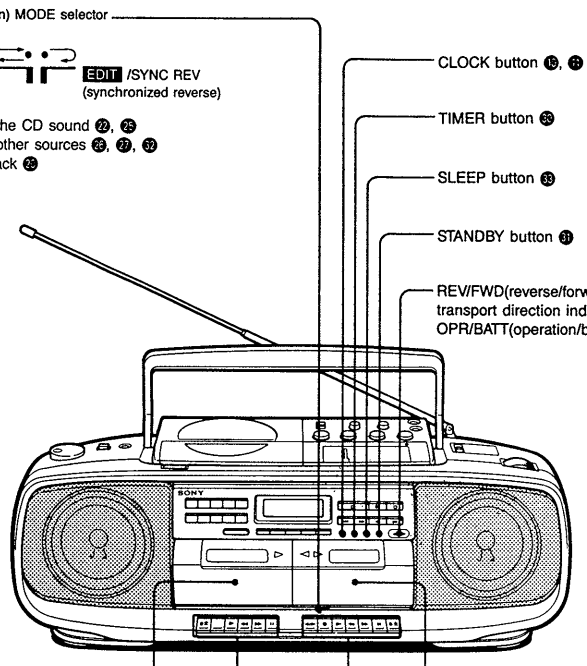
Refer to the pages indicated in ● for details.

CD Player Section

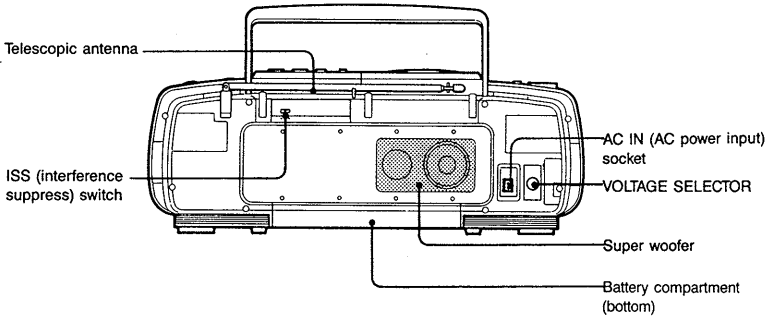


Radio Cassette-Corder and Clock Section

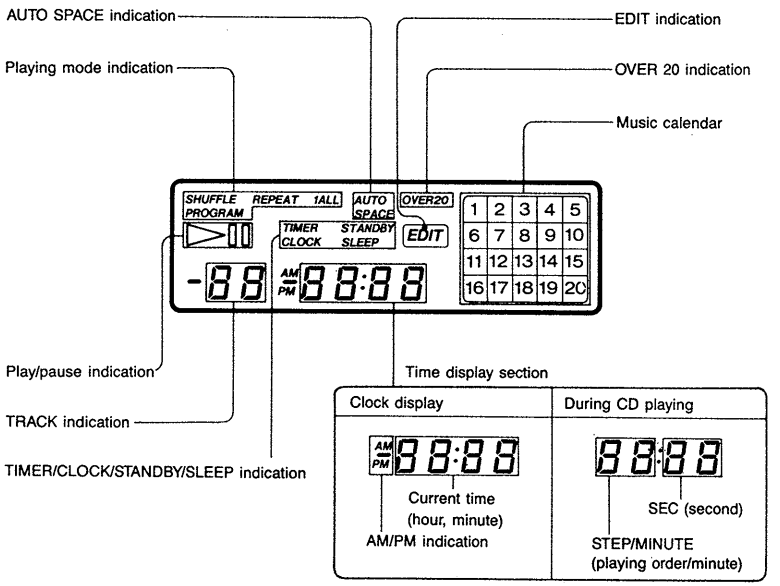
Front



Rear Panel

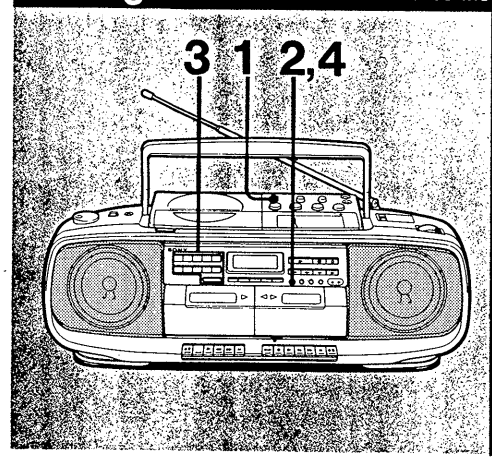


Display Section



Setting the Clock

R6 (size AA) batteries for the clock/timer should be inserted in the battery compartment.



1 Make sure the FUNCTION selector is not set to CD when the unit is ON.

AM 12:00

2 Press for about 4 seconds until CLOCK appears in the display window.

CLOCK
AM - 2:00

3 Press the number buttons to enter the hour and then the minute. If the hour and/or minute has one digit, be sure to press 0 before the number.
Select AM or PM by +10/AM, PM.

Example: To set to 8:45 PM.

CLOCK AM 0-:00 → CLOCK AM 08:-0 → CLOCK AM 08:4- → CLOCK AM 08:45 → CLOCK AM 08:45

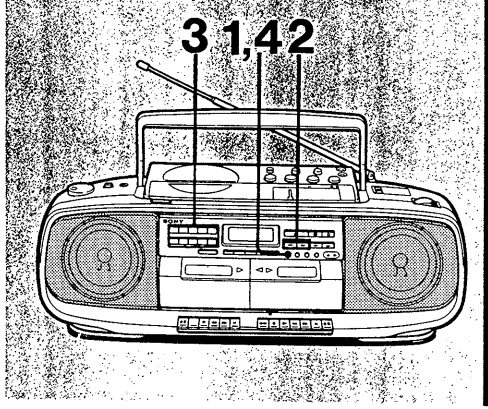
4 Press again.

The clock starts.

PM 8:45

To Change One Digit

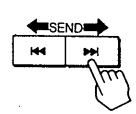
Example: To change AM 1:01 to AM 1:00



1 Press for about 4 seconds until CLOCK appears in the display window.

CLOCK
AM - 1:01

2 Press three times until "–" comes to the last digit.



"–" moves to the left by pressing |◀◀.

CLOCK AM 0-:01 → CLOCK AM 01:-1 → CLOCK AM 01:0-

3 Press the number button.

CLOCK
AM 01:00

4 Press again.

The clock starts.

AM 1:00

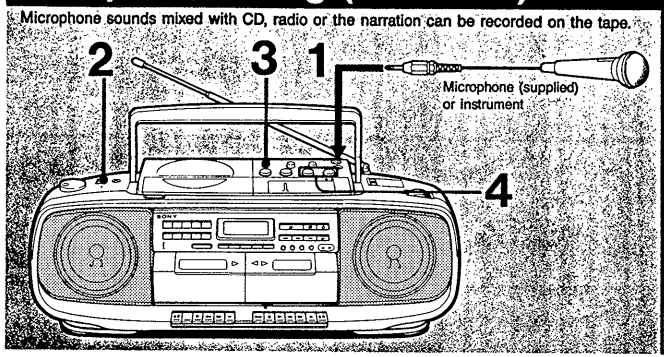
Time indication
AM 12:00=midnight
PM 12:00=noon

To set the clock exactly to the second
Use the radio or telephone time signal.
Set the time indication to several minutes in anticipation of a setting time. Then, press the CLOCK button simultaneously with the radio or telephone time signal.

To check the current time
The display window shows the current time except when the CD is playing. To check the time when the FUNCTION selector is set to CD, press the CLOCK button.

Microphone Mixing (KARAOKE)

Microphone sounds mixed with CD, radio or the narration can be recorded on the tape.



1 **Connect a microphone or a musical instrument to MIC 1 or 2.**

MIC 1:
Connect the microphone (if it has a power switch, set it to on). Do not connect any musical instrument.

MIC 2/INSTRUMENT:
Connect either the microphone or the musical instrument.

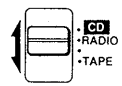
Microphone:
MIC 2/INSTRUMENT selector to OFF 🎵.

Musical instrument:
MIC 2/INSTRUMENT selector to ON 🎵.

2 **Press (🎵 ON).**

🎵 ON/🎵OFF
(TIMER/SLEEP)

3 **Select the sound source desired.**

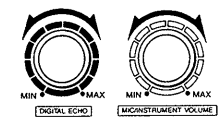


FUNCTION

Sound source	FUNCTION selector
CD sound	CD
Radio programs	RADIO
Tape sound*	TAPE

When you set the FUNCTION selector to RADIO, the digital echo cannot be activated.

4



The digital echo cannot be activated on the musical instrument.

Using KARAOKE MODE selector

When you use the tape or the disc with a multiple recorded system (Left channel: musical track, Right channel: vocal track), set the selector as below.

ON 🎵	The left channel sound is heard from both speakers.
OFF 🎵	The left channel sound is heard from the left speaker and the right channel sound is from the right speaker.

Notes

- When you listen to the normal tapes, the discs, the radio reception or record the tapes (dubbing), set the KARAOKE MODE selector to OFF 🎵.
- When the selector is set to ON 🎵 and start recording, the right channel sound cannot be recorded.

To Record Mixed Sounds

Microphone sounds mixed with CD, radio or the tape can be recorded on the tape.

1 Insert a recorded tape into deck A, a blank cassette into deck B.
2 Set FUNCTION to DUBBING.
3 Press ▶ of deck A, ● of deck B.

Notes

- If a howling (acoustic feedback) occurs, move the microphone away from the speakers or turn down the microphone volume or the digital echo level.
- When you use a microphone equipped with echo function, a howling is likely to occur.
- If the musical instrument is connected and the sound is distorted, turn down the volume of the connected musical instrument. Do not connect the bass guitar.
- During high speed dubbing, microphone mixing cannot be done.
- During micrphone mixing, turn down the MEGA BASS control a little.

Public Address System

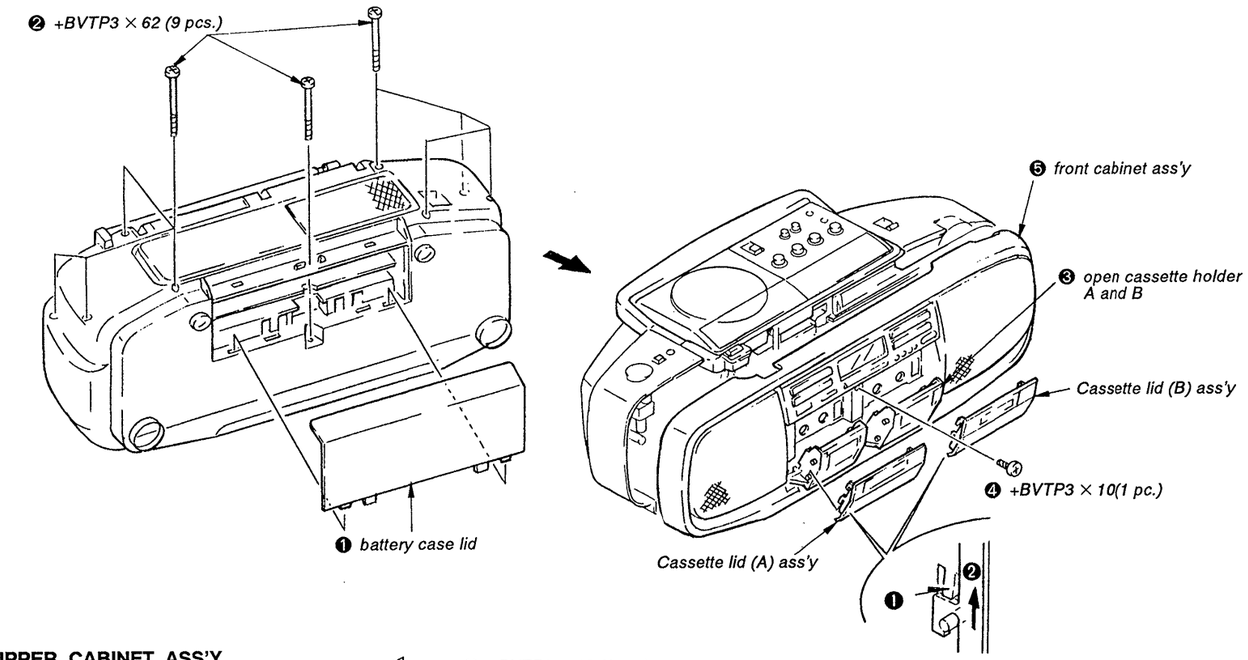
1 Connect a microphone to MIC 1. If the microphone has a power switch, set it to on.
2 Press POWER.
3 Set the FUNCTION selector to TAPE.
4 Adjust VOLUME.

If the unit is set in the recording mode, only the sound from the microphone is recorded.

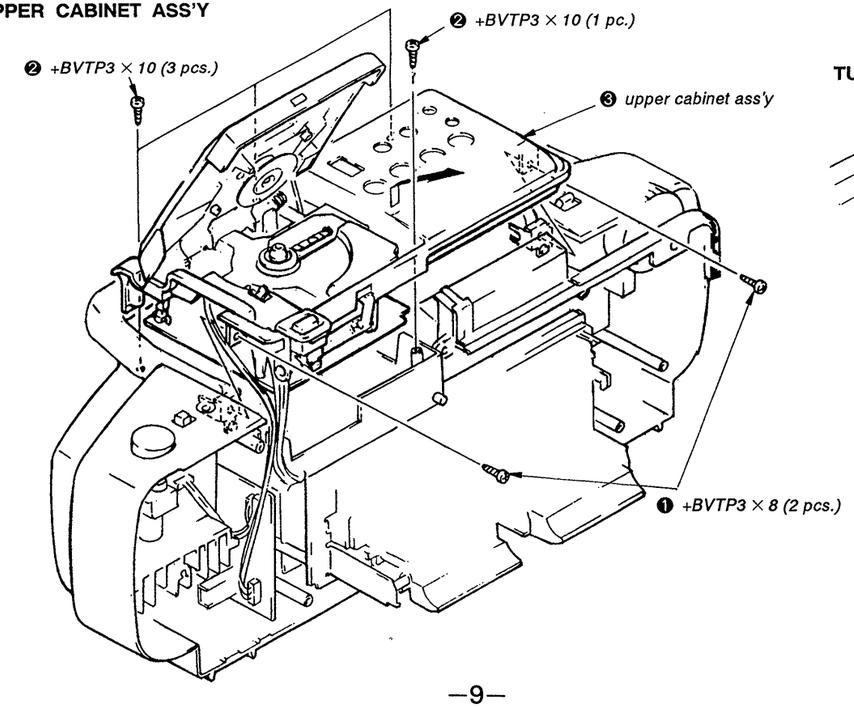
SECTION 3
DISASSEMBLY

NOTE: Follow the disassembly procedure in the numerical order given.

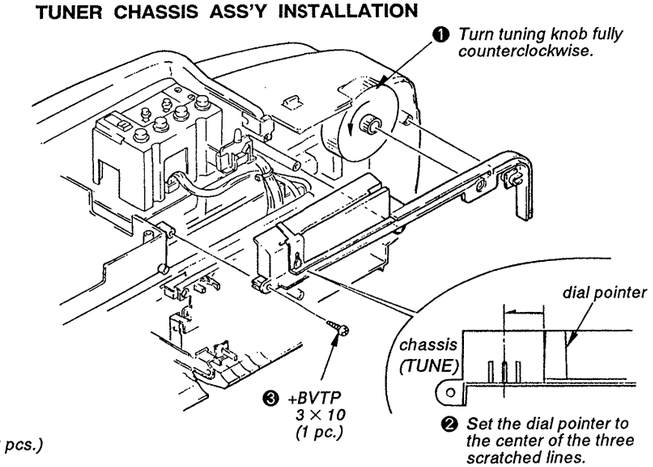
FRONT CABINET ASS'Y, CASSETTE LID ASS'Y


❷ +BVTP3 × 62 (9 pcs.)
❶ battery case lid
❺ front cabinet ass'y
❸ open cassette holder A and B
Cassette lid (B) ass'y
❹ +BVTP3 × 10(1 pc.)
Cassette lid (A) ass'y
❶
❷

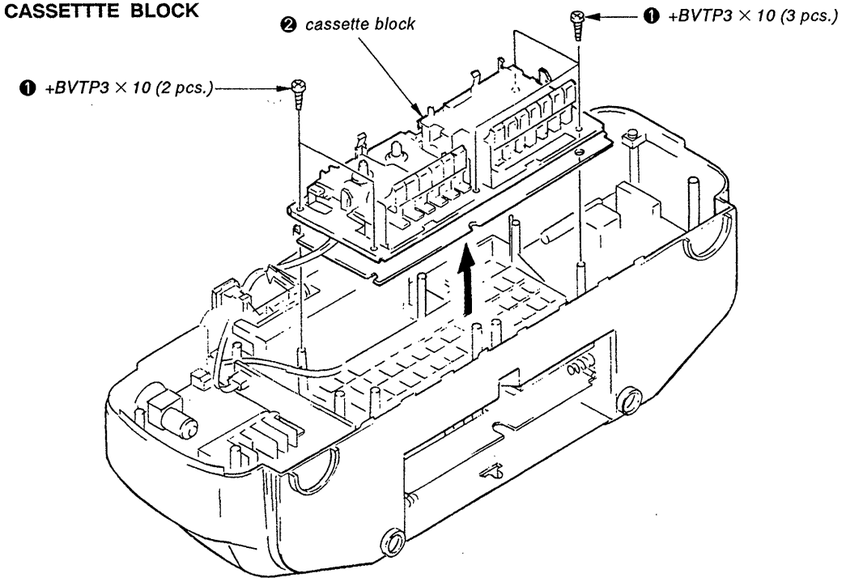
UPPER CABINET ASS'Y



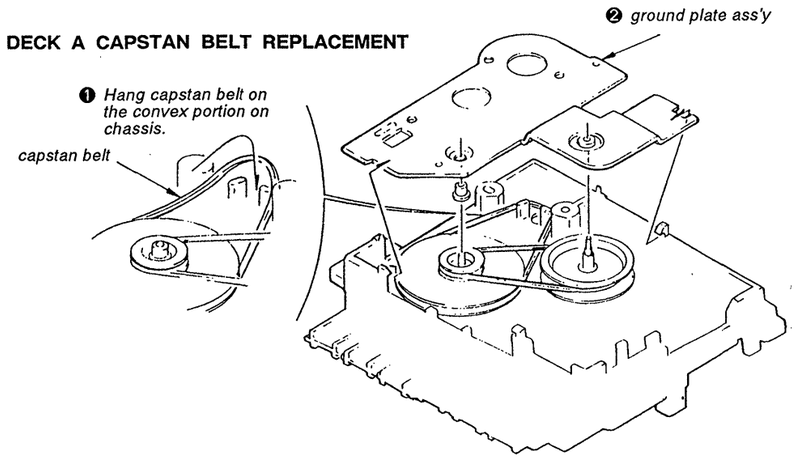
TUNER CHASSIS ASS'Y INSTALLATION

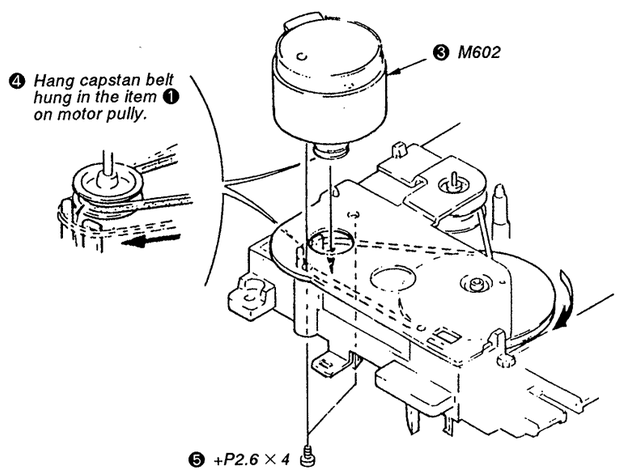

❶ Turn tuning knob fully counterclockwise.
dial pointer
chassis (TUNE)
❸ +BVTP 3 × 10 (1 pc.)
❷ Set the dial pointer to the center of the three scratched lines.

CASSETTTE BLOCK



DECK A CAPSTAN BELT REPLACEMENT





SECTION 4
ADJUSTMENTS

4-1. MECHANICAL ADJUSTMENT

TAPE RECORDER SECTION

PRECAUTION

1. Clean the following parts with a denatured-alchohol-moistened swab:
   record/playback head — pinch rollers
   erase head — rubber belts
   capstans — idlers
2. Demagnetize the record/playback/erase head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed in the order given in this service manual.

Torque Measurement

DECK A:

Mode	Torque Meter	Meter reading
FWD	CQ-102C	22 – 55 g•cm (0.30 – 0.76 oz•inch)
FWD back tension		2 – 5 g•cm (0.03 to 0.06 oz•inch)
FF	CQ-201B	more than 55 g•cm (more than 0.76 oz•inch)
REW	CQ-201B	more than 55 g•cm (more than 0.76 oz•inch)

DECK B:

Mode	Torque Meter	Meter reading
FWD	CQ-102C	28 – 60 g•cm (0.38 – 0.83 oz•inch)
FWD back tension		2 – 5 g•cm (0.03 to 0.06 oz•inch)
REV	CQ-102RC	28 – 60 g•cm (0.38 – 0.83 oz•inch)
REV back tension		2 – 5 g•cm (0.03 to 0.06 oz•inch)
FF	CQ-201B	55 – 100 g•cm (0.76 – 1.38 oz•inch)
REW	CQ-201B	55 – 100 g•cm (0.76 – 1.38 oz•inch)

Tape Tension

DECK A, B

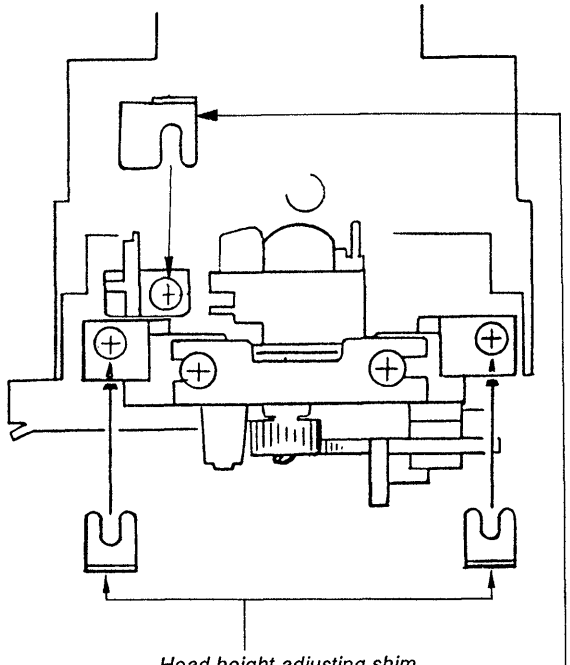
Mode	Tension Meter	Meter reading
FWD	CQ-403A	more than 100g (more than 1.38 oz•inch)
REV (Deck B)	CQ-403R	

Head Height Adjustment DECK B

Adjustment Procedure:

1. Insert a mirror cassette CQ-009C.
2. Make the set to FWD playback mode.
3. Loosen the FWD tape guide fixing screw and adjust with inserting the adjusting shim to eliminate tape curl and tape twist in the portions of tape guide and head.
4. Make the set to REV tape guide fixing screw and adjust with inserting the adjusting shim to eliminate tape curl and tape twist in the portions of tape guide and head.
5. Loosen the REV tape guide fixing screw and adjust with inserting the adjusting shim to eliminate tape curl and tape twist in the portions of tape guide and head.
6. After adjsutment, apply suitable locking compound to the fixing screws.

Adjustment Location:



Head height adjusting shim

Part No.	T
3-336-274-01	0.1
3-336-274-11	0.2
3-336-274-21	0.3

Tape guide height adjusting shir

Part No.	T
4-932-603-01	0.1
4-932-603-11	0.2

4-2. ELECTORICAL ADJSUTMENTS

TAPE RECORDER SECTION

PRECAUTION

1. Adjustments should be performed in the order given.
   Generally playback circuit adjusments should be completed before performing recording circuit adjustments.
2. Adjustments should be performed for both L-ch and R-ch.
   Switches and controls should be set as follows unless otherwise specified.

- **Positions of switches and control knobs**

FUNCTION ..... TAPE
ISS 2
DIRECTION MODE ..... ⇆
TONE ..... Maximum
MEGA BASS ..... Maximum

- **Standard input level**

Input Pin	MIX MIC
Signal source impedance	300 Ω
Input signal level	2.5 mV − 50 (2.5 dB)
Frequency	1 kHz

- **Standard output level**

Output Pin	SP OUT (L. R)	PHONES
Signal source impedance	3Ω	32Ω
Output signal level	0.775 V (0 dB)	0.245 V (− 10 dB)

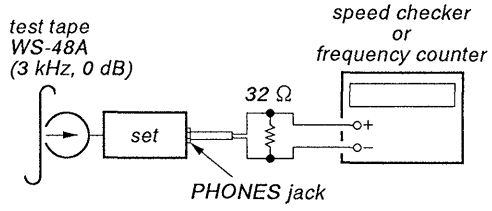
0 dB=0.775 V

- **Test tape**

Test Tape	Signal	Used for
WS-48A	3 kHz, 0 dB	Tape speed adjustment
P-4-A100	10 kHz, − 10 dB	Head azimuth and phase adjustment
P-4-L300	315 Hz, 0 dB	PB level adjustment
CS-122	–	Recording bias and Recording level adjustment

Tape Speed Adjustment DECK A DECK B

Procedure:
Mode: FWD playback



Perform high speed adjsutment before normal speed adjustment.
Playback the test tape WS-48A and adjust to meet below.

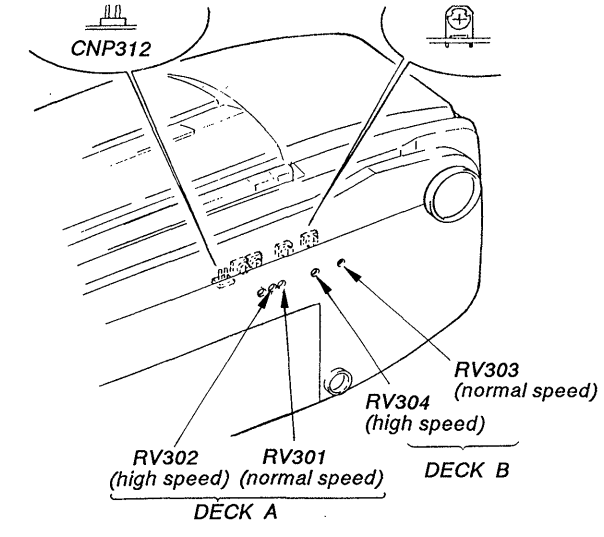
Adjustment Value:

Speed	deck	Adjust-ment part	test pin CNP312	speed checker heading	frequency counter reading
high	A	RV302	short	− 0.66 to − 0.33%	5,970 ± 10 Hz
	B	RV304			
normal	A	RV301	open	− 0.66 to − 0.33%	2,985 ± 5 Hz
	B	RV303			

Frequency difference between FWD and REV should be within 0.5%

Adjustment Location: TC board

shorting this point with the tip of screwdriver etc. makes the set high speed mode.

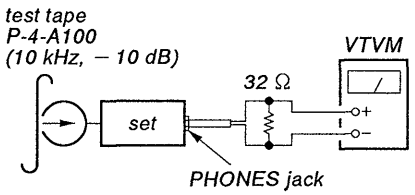


Record/Playback Head Azimuth Adjustment

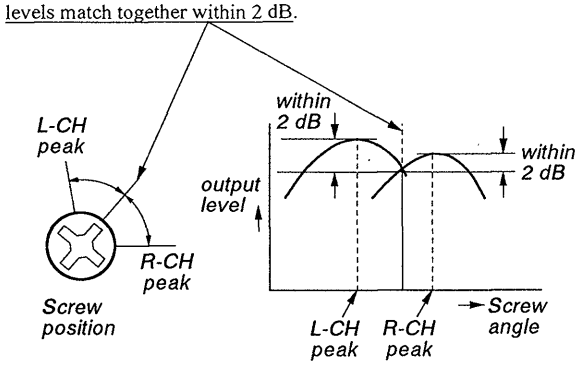
DECK B

Procedure:

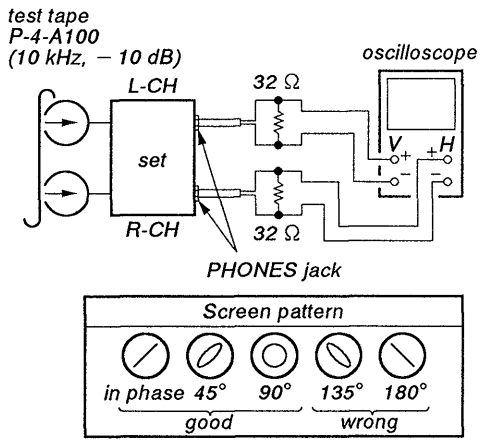
1. Mode: FWD/REV playback



2. Turn the adjsutment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 2 dB.

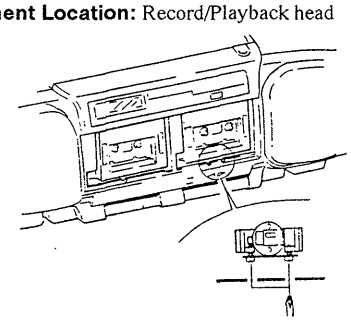


3. Phase Check
   Mode: FWD/REV playback



4. Set in the REV mode and repeat the step 1 to 3.
5. After the adjustment, lock the screws with locking compound.

Adjustment Location: Record/Playback head

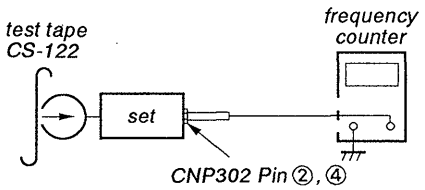


Recording Bias Frequency Adjustments DECK B

Procedure:

1 Record

- VOLUME ····· standard output level position (See page 12).



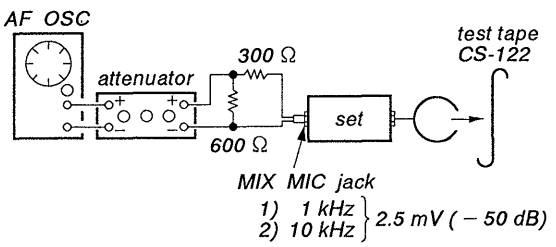
Adjust with T301so that the bias frequency on CNP302 Pins ② (L-ch) and ④ (R-ch) becomes 107.0 ± 0.5 kHz.

Adjustment Location: TC board (See page 14).

Recording Bias Adjustment DECK B

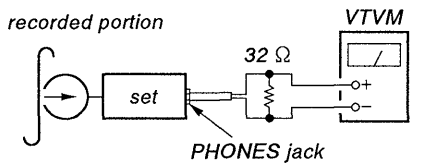
Procedure:

1. Record



2. Playback

- VOLUME ····· standard output level position. (See page 12).

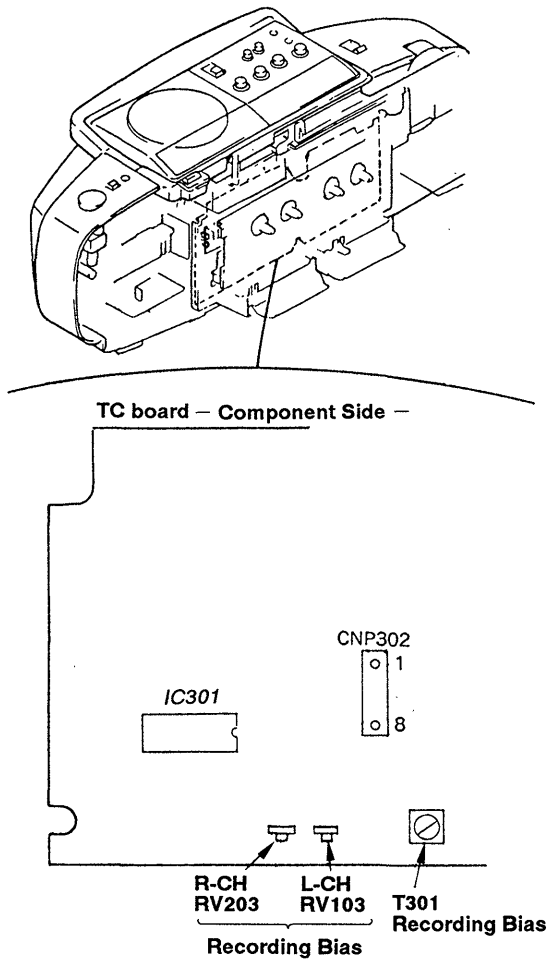


3. Playback the recorded signal on item 1, and comfirm the signal level becomes to the adjustment value. When it is out of order, adjust with RV103 (L-ch) and RV203 (R-ch) and repeat items 1 to 3.

Adjustment Value: 10 kHz playback level difference adjsut 1 kHz playback level; – 0.5 to +0.5 dB.

Adjustment Location: TC board (See page 14).

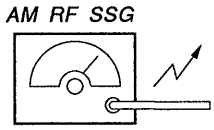
[Adjsutment Location]



TUNER SECTION

See page 16 for Adjustment Location.
FUNCTION switch: RADIO

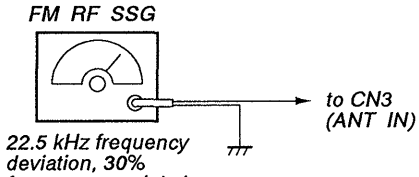
[AM]
BAND switch: AM



30% amplitude modulation by 400 Hz signal

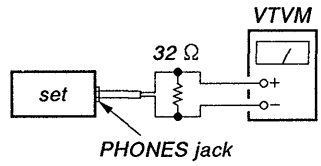
Output level: as low as possible

[FM/VHF]
BAND switch: FM



22.5 kHz frequency deviation, 30% frequency modulation by 400 Hz signal

Output level: as low as possible



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	518 kHz
CT4	1,680 kHz

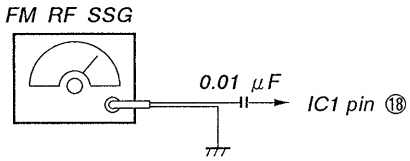
AM TRACKING ADJUSTMENT	
Adjsut for a maximum reading on VTVM.	
L3	620 kHz
CT3	1,400 kHz

FM/VHF (1 – 3) FREQUENCY COVERAGE ADJUSTMENT	
Adjsut for a maximum reading on VTVM.	
L2	74.6 MHz
CT2	109.5 MHz

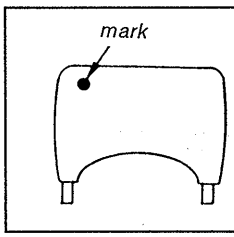
FM/VHF (1 – 3) TRACKING ADJUSTMENT	
Adjsut for a maximum reading on VTVM.	
L1	74.6 MHz
CT1	109.5 MHz

FM VCO ADJUSTMENT

Procedure:
BAND switch: FM



Carrier Frequency: According to the color of the mark on ceramic filter (CF2).

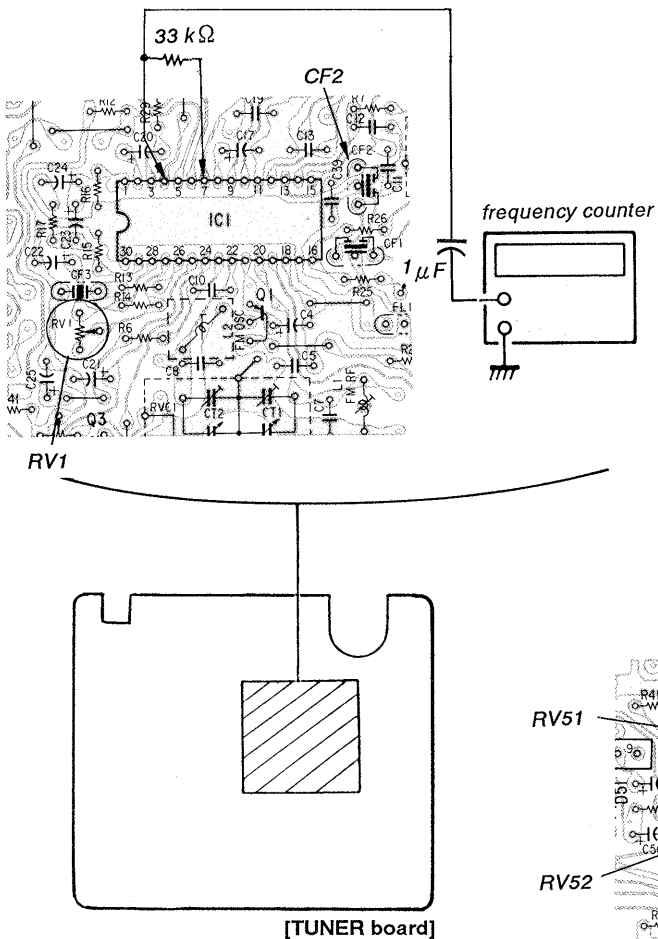


Mark	Carrier Frequency
red	10.7 MHz
blue	10.67 MHz
orange	10.73 MHz
black	10.64 MHz
white	10.76 MHz

Output Level: 80 – 90 dB

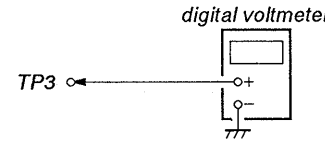
1) Adjust with RV1 so that the reading on the frequency counter becomes 76.0 ± 0.3 kHz.

Adjustment Location: TUNER board



Tuning Voltage Adjsutment

BAND switch ····· UHF



Procedure:

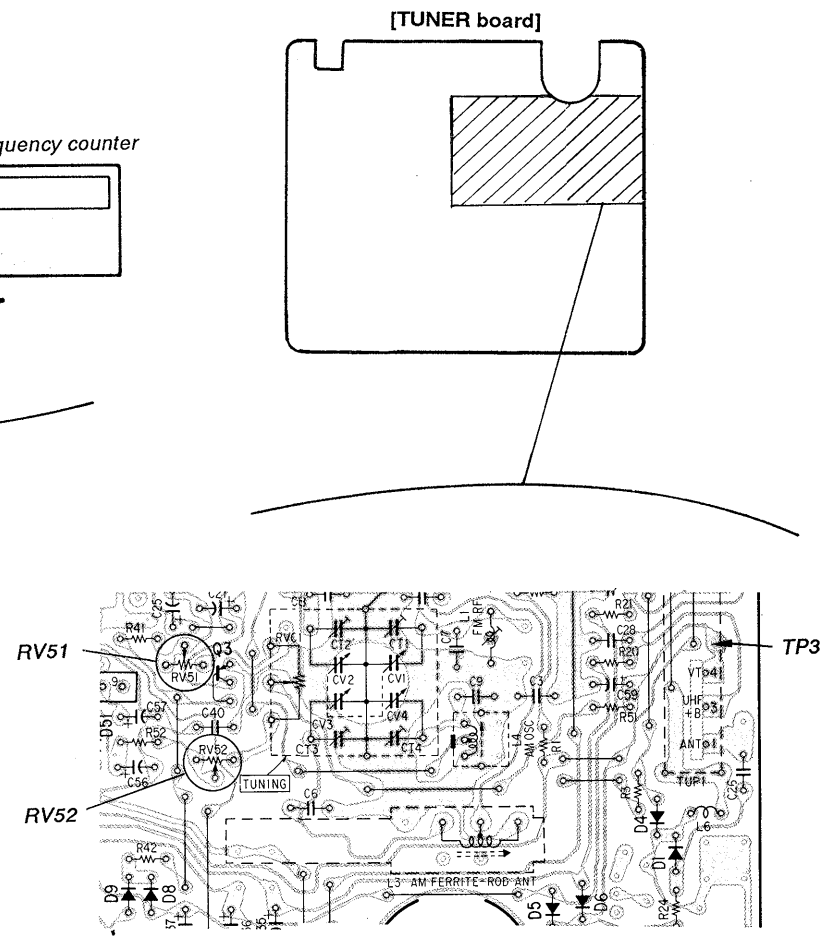
1. Set the frequency of the variable capacitor to maximum and adjust with RV52 so that the reading on the digital voltmeter becomes to the adjustment value.
2. Set the frequency of the variable capacitor to minimum and adjust with RV51 so that the reading on the digital voltmeter becomes to the adjustment value.

Adjustment Value: Maximum: 24.0 ± 0.1 V
Minimum: 1.0 ± 0.1 V

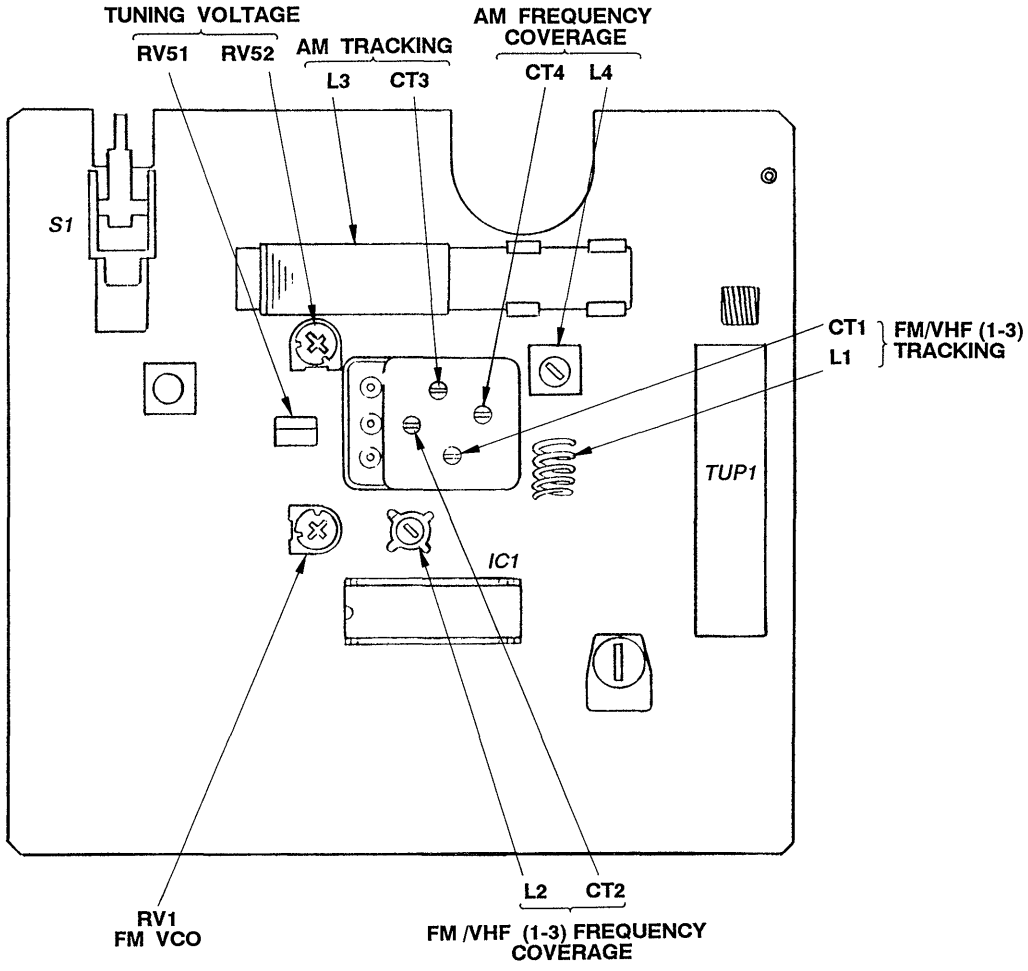
3. Maximize the frequency of the variable capacitor again and confirm the adjustment value is satisfied.
4. Confirm the tuning voltage value on the following frequency of the variable capacitor.

VHF 4CH (175.75 MHz)····· 2.6 ± 1 V
12CH (221.75 MHz)····· 21.0 ± 1 V
UHF 13CH (475.75 MHz)····· 3.0 ± 1 V
62CH (769.75 MHz)····· 21.0 ± 1 V

Adjustment Location: TUNER board



[Tuner Section Adjustment Location]



CD SECTION

Notes on Adjustment

1. Perform adjustment in the test mode.
   After adjustment, be sure to release the test mode.
2. Perform adjustments in the order given.
3. Use the disc (YEDS-18, Part No. 3-702-101-01) only when so indicated.

Before Adjsutment

Put the set into the test mode and perform the following checks. Repair if there are any problems.

How To Put the Set into Test Mode

1. Short circuit JW801and JW802 on CD CONTROL board.
2. Set Function switch to CD.
3. Turn POWER on.
4. After LCD801 test pattern blinks for approx four seconds, release short-circuit position JW801 and JW802.

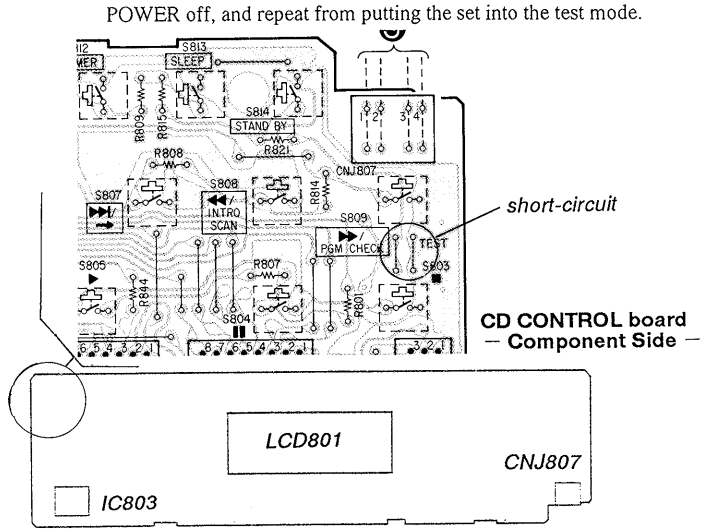
- **Sled Motor Check**

1. Press ❚❚ key. (LCD801 test pattern is stop and BTL MUTE is released.)
2. Press ▶▶| , |◀◀ keys and comfirm that the FOP moves smoothly from the innermost to outermost circumference and back smoothly and with no catching or abnormal noises.
   ▶▶| : FOP moves to the outer circumference
   |◀◀ : FOP moves to the inner ciecumference

- **Focus Search Check**

1. Press ▶ key. (Function search operation is performed contionuosly.)
2. Look at the FOP objective lens and confirm that it moves up and down smoothly, with no catching or abnormal noises.
3. Press ■ key.
   Focus search operation stops.
   Turntable continues turn.
4. Press ■ key again longer, turntable stops.

Note: When the malfunction is occured with pressing other keys, turn POWER off, and repeat from putting the set into the test mode.

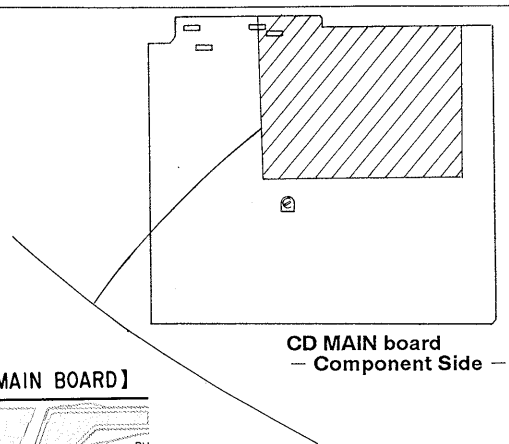


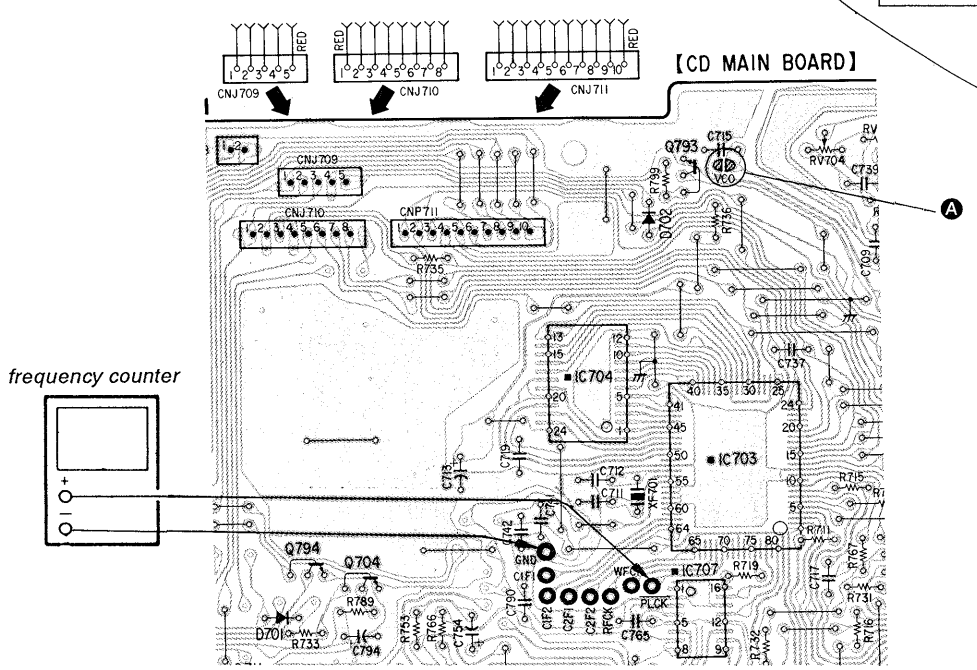
VCO Adjsutment

Adjustment Procedure:

1. Short-circuit Ⓐ portion on CD main board.
2. Adjust with RV703 so that the reading on frequency counter becomes 4.3218 MHz.
3. Release the short-circuit Ⓐ portion.

Adjustment Location: CD Main Board

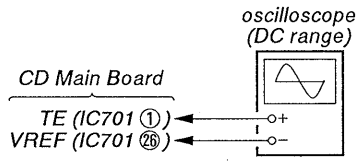




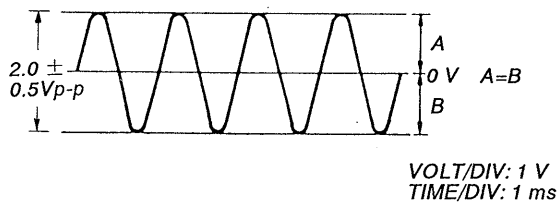
E. F Balance Adjsutment

This adjustment is to be done when the optical block is replaced.

Adjustment Procedure:



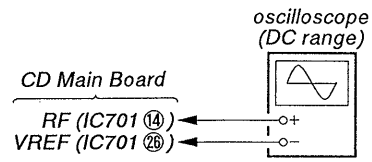
1. Connect the oscilloscope between IC701 pins ① and ㉖.
2. Put the set into the test mode.
3. Press the ▶▶| and |◀◀ keys to move the FOP to the center.
4. Insert disc (YEDS-18) and press ▶ key.
5. Adjust RV701 so that the oscilloscope traverse waveform is symmetrical, as shown in the figure below.
6. Release servise mode after adjustment is completed.



Focus Bias Adjsutment

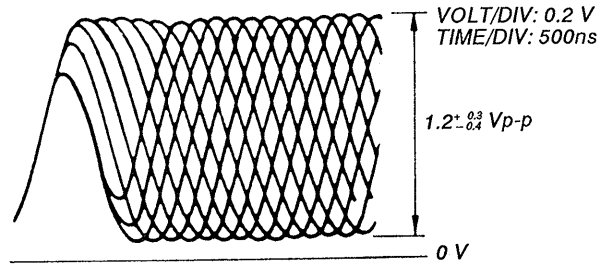
This adjustment is to be done when the optical block replaced.

Adjustment Procedure:



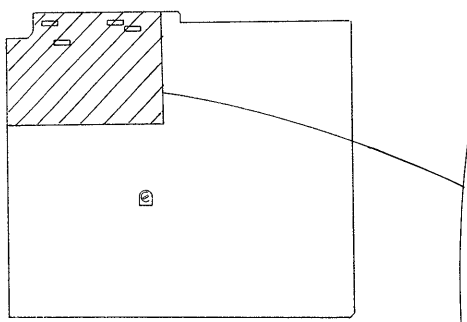
1. Connect the oscilloscope between IC701 pin ⑭ and ㉖.
2. Put the setr into service mode.
3. Press the ▶▶| and |◀◀ keys to move the FOP to the center. (Move the FOP to the music area on the disc to enable easy visibility of the eye pattern.)
4. Insert disc (YEDS-18) and press ▶ key.
5. Adjust RV702 so that the oscilloscope waveform os as shown in the figure below (eye pattern).
   A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.
6. Release service mode after adjustment is completed.

- RF signal reference waveform (eye pattern)

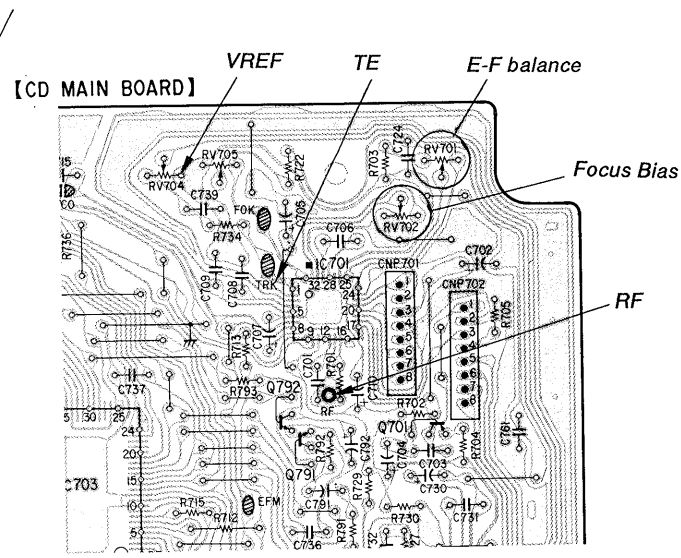


When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensivity.

Adjustment Location: CD MAIN board



CD Main Board
– Component Side –



Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.
However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.
Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.
However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

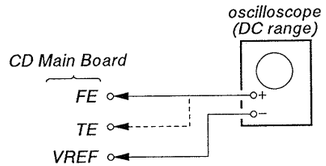
Symptoms / Tracking	Gain	Focus
• The time until music starts becomes longer for STOP ➡ ▶ PLAY or automatic selection (⏮ , ⏭ buttons pressed). (Normally takes about 2 seconds.)	low	low or high
• Music does not start and disc continues to rotate for STOP ➡ ▶ PLAY or automatic selection (⏮ , ⏭ buttons pressed).	—	low
• Sound is interrupted during PLAY. Or time counter display stops progressing.	—	low
• More poise during 2-axis device operation.	high	high

The following is a simple adjustment method.

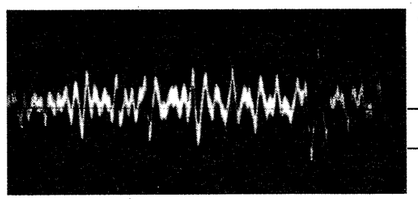
– Simple Adjustment –

Note: Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure:

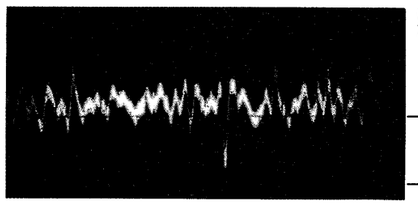


1. Keep the set horizontal.
   (If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2-axis device.)
2. Insert disc (YEDS-18) and press ▶ PLAY button.
3. Connect oscilloscope to main amp board FE.
4. Adjustment RV705 so that the waveform is as shown in the figure below. (focus gain adjustment)

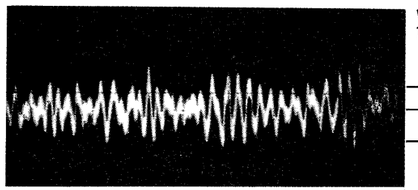


- Incorrent Examples (DC level changes more than on adjusted waveform)

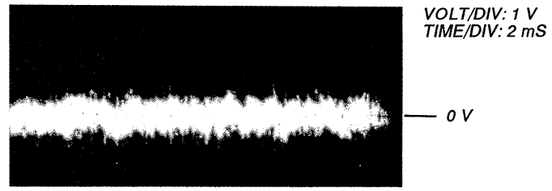
low focus gain



high focus gain

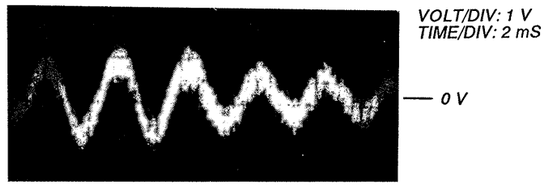


5. Connect oscilloscope to CD main board TE.
6. Adjust RV704 so that the waveform is as shown in the figure below. (tracking gain adjustment)

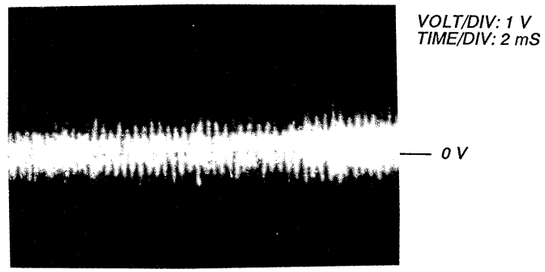


- Incorrect Examples (fundamental wave appears)

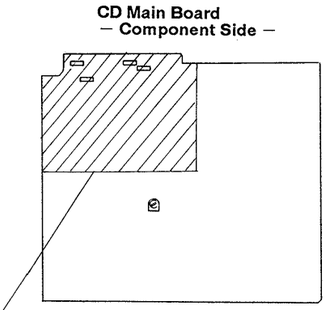
low tracking gain

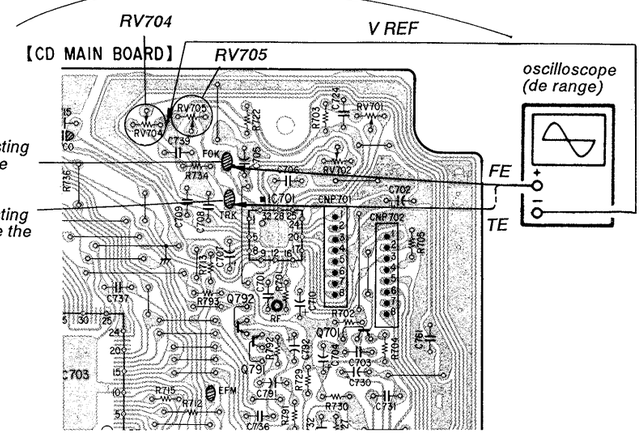


high tracking gain
(higher fundamental wave than for low gain)



Adjustment Location: CD Main Board





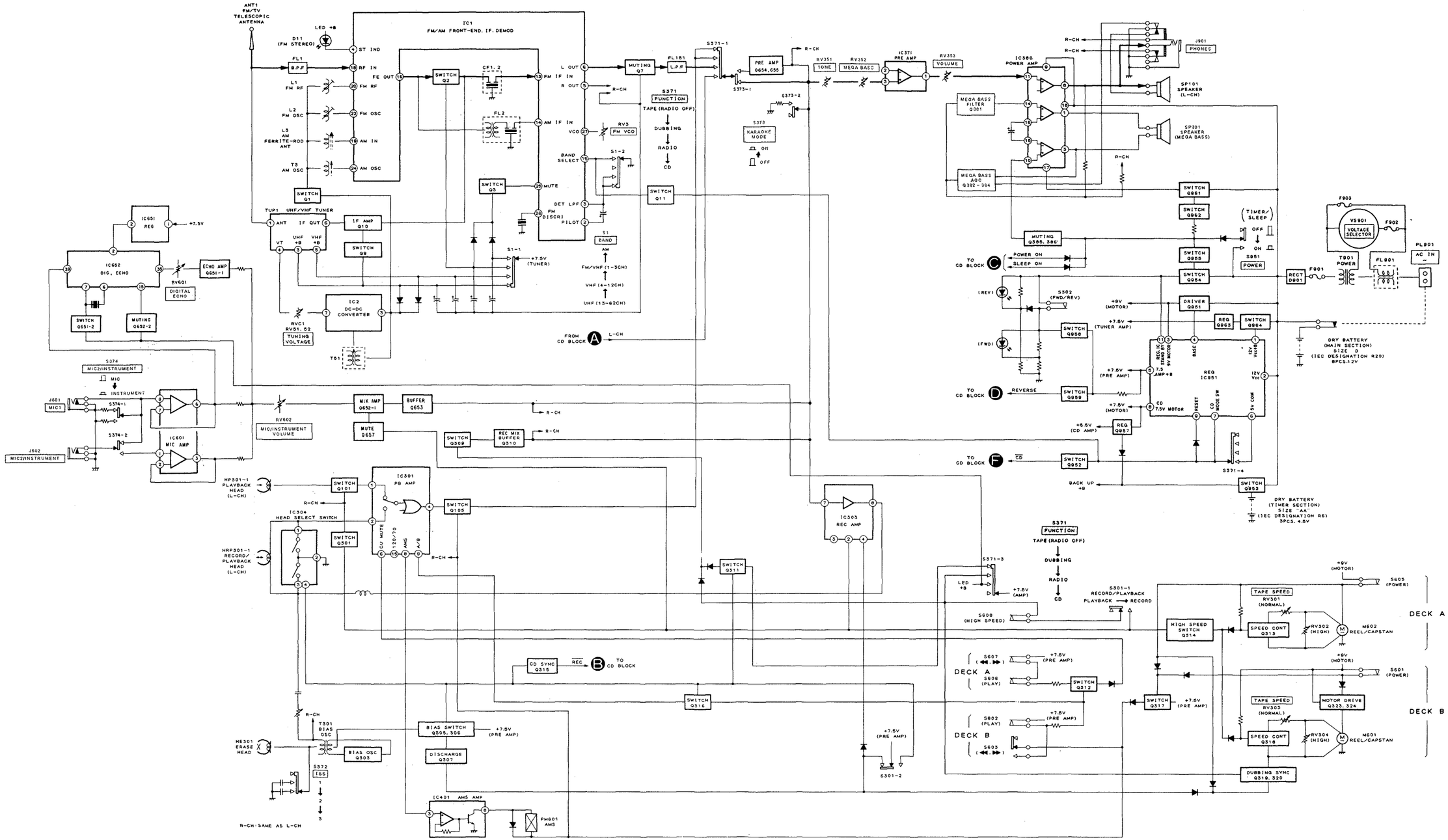
* *Remove the solder bridge while adjusting the focus gain. (After adjustment make the solder bridge.)*

* *Remove the solder bridge while adjusting the track gain. (After adjustment make the solder bridge.)*

* *When a frequency response analyzer is used.*

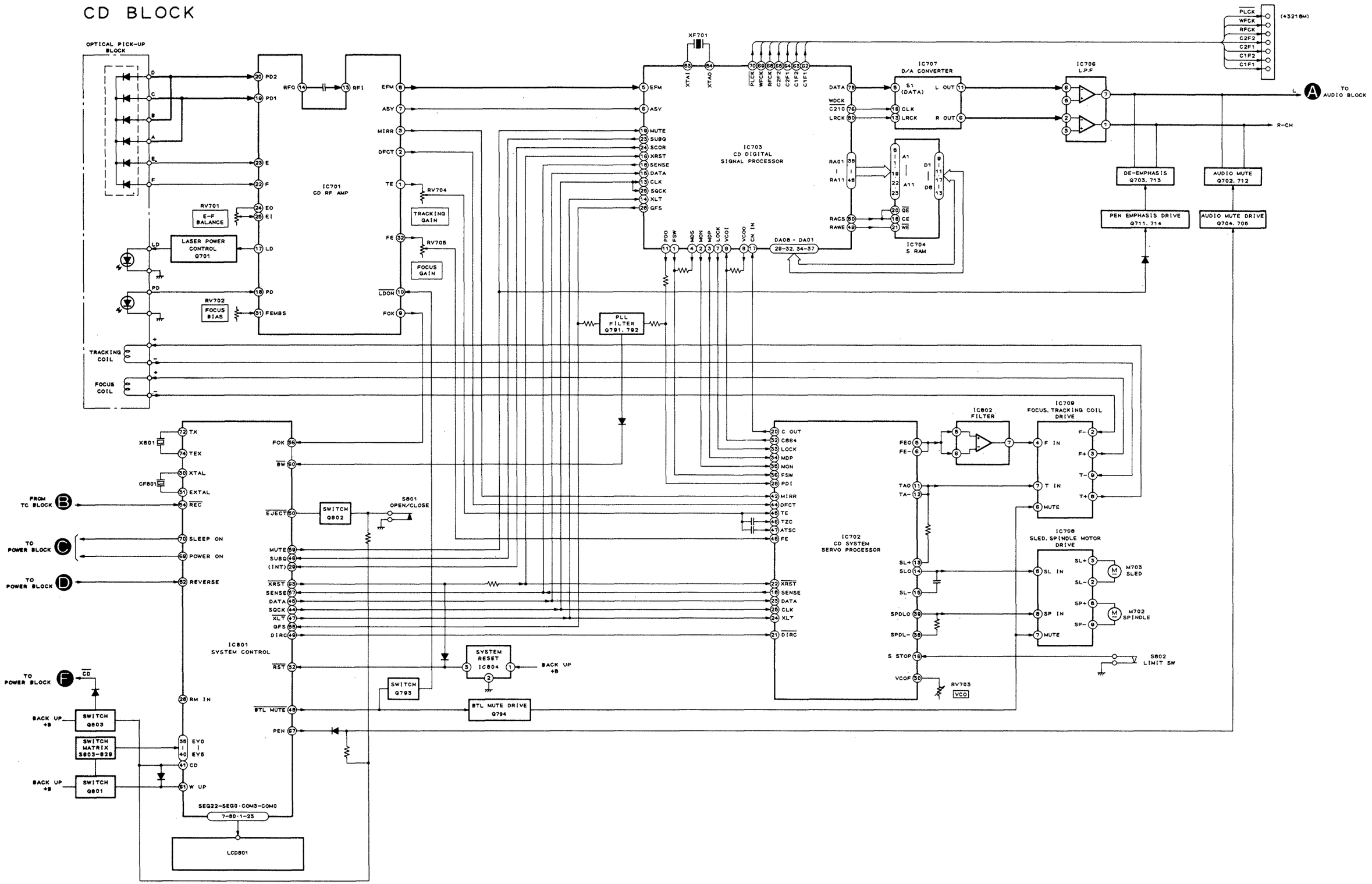
SECTION 5
DIAGRAMS

5-1. TUNER, TAPE, POWER SUPPLY SECTION BLOCK DIAGRAM

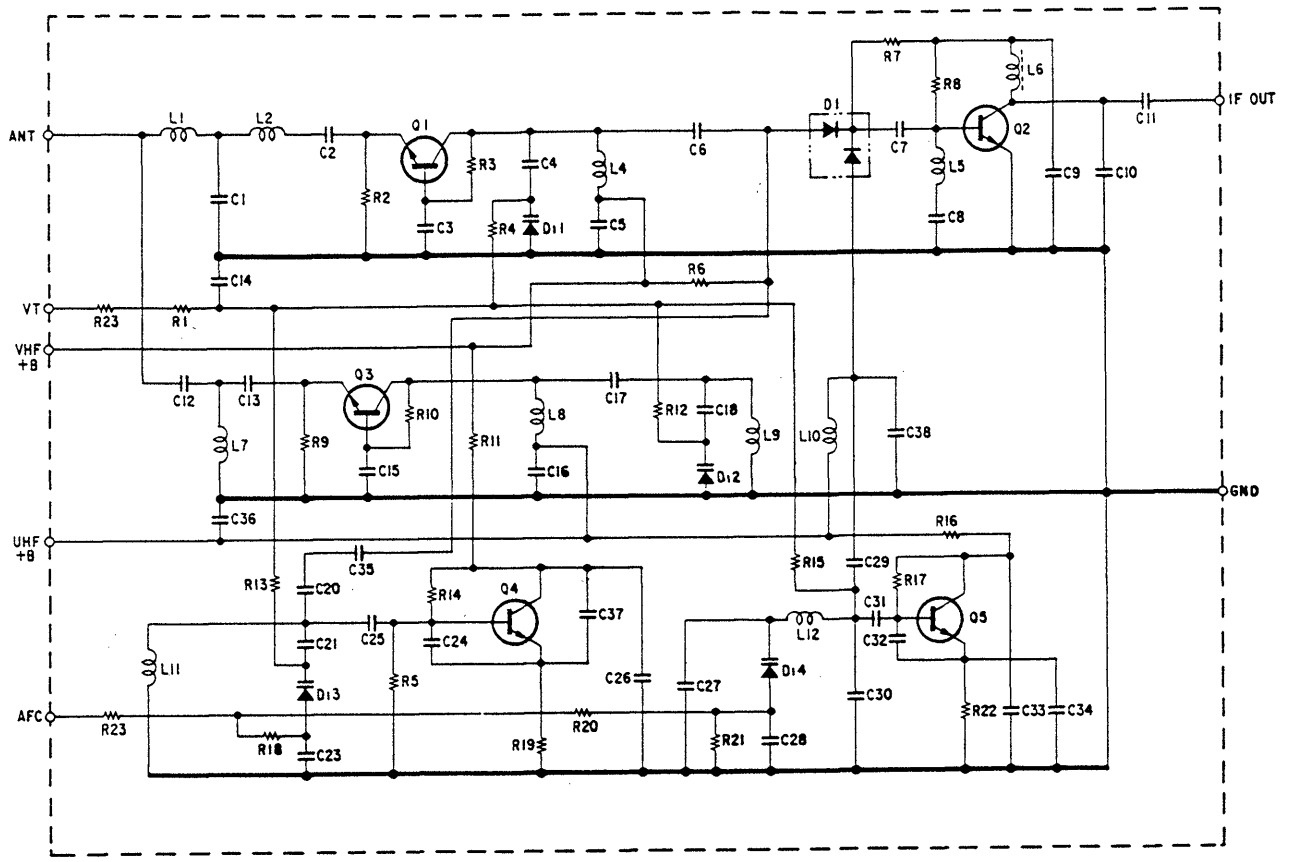


5-2. CD SECTION BLOCK DIAGRAM

CD BLOCK

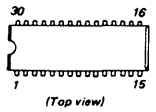


• **Tuner Unit Schematic Diagram 1-465-101-21**

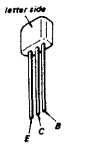


• **Tuner Section Semiconductor Lead Layouts**

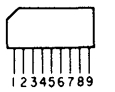
CXA1238S



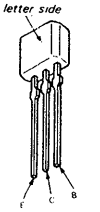
DTC114TS



TA8118S

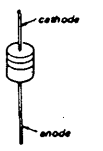


2SA1175-HFE

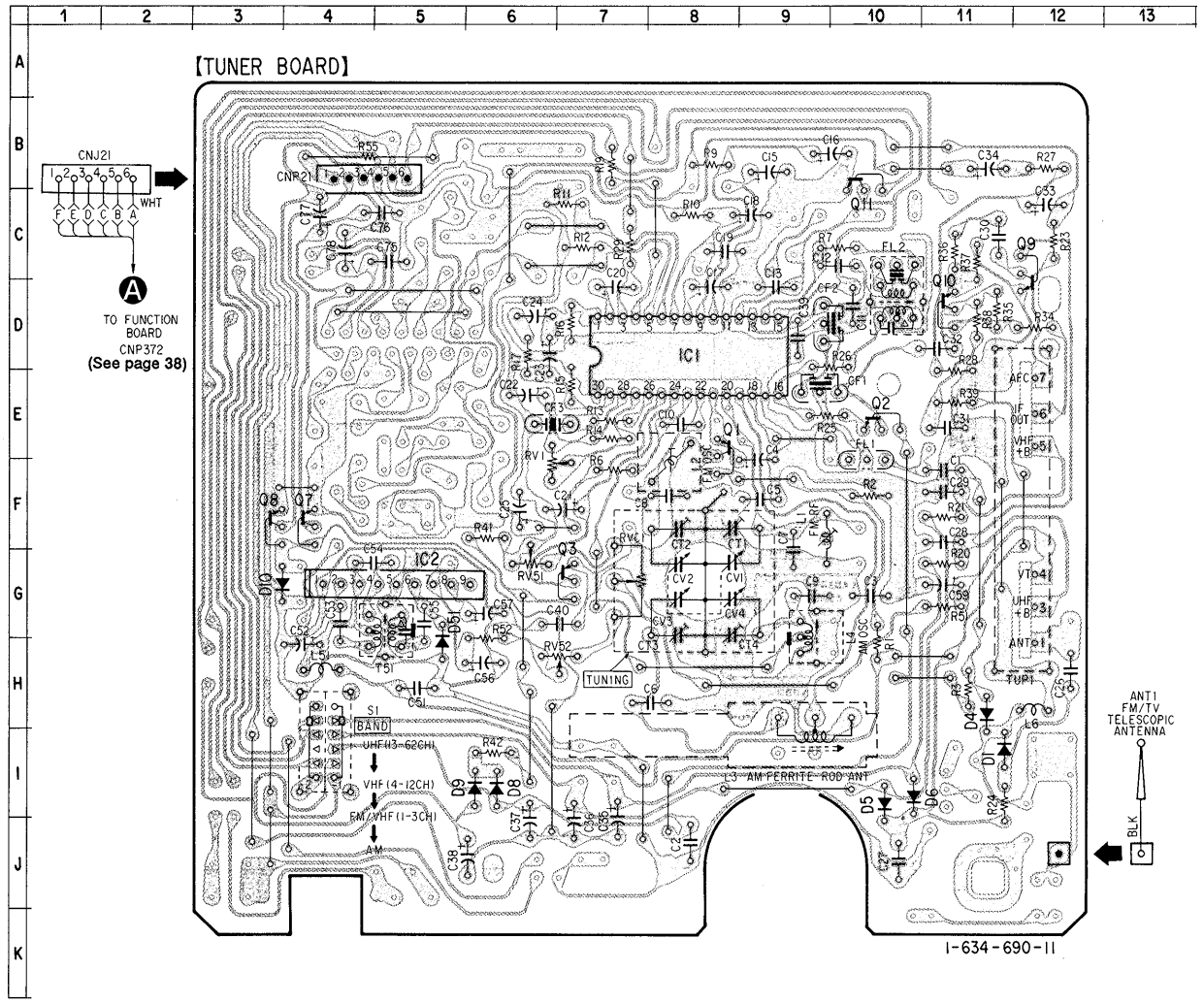


DTC114YS
DTC143TS
2SC1740S-QR

1SS119



5-3. TUNER SECTION PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM



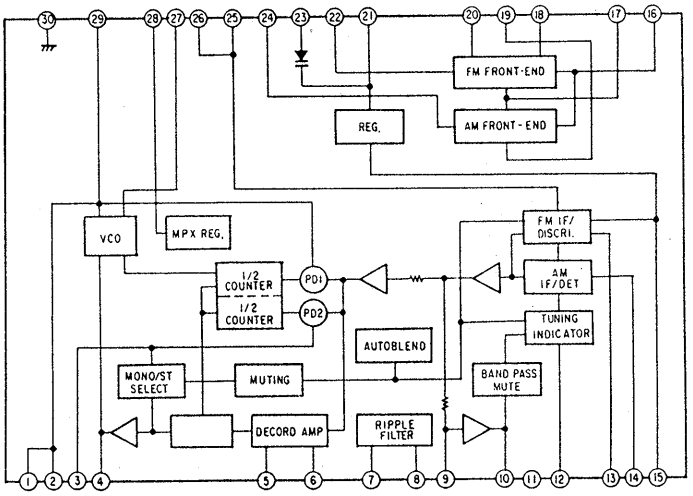
• Semiconductor Location

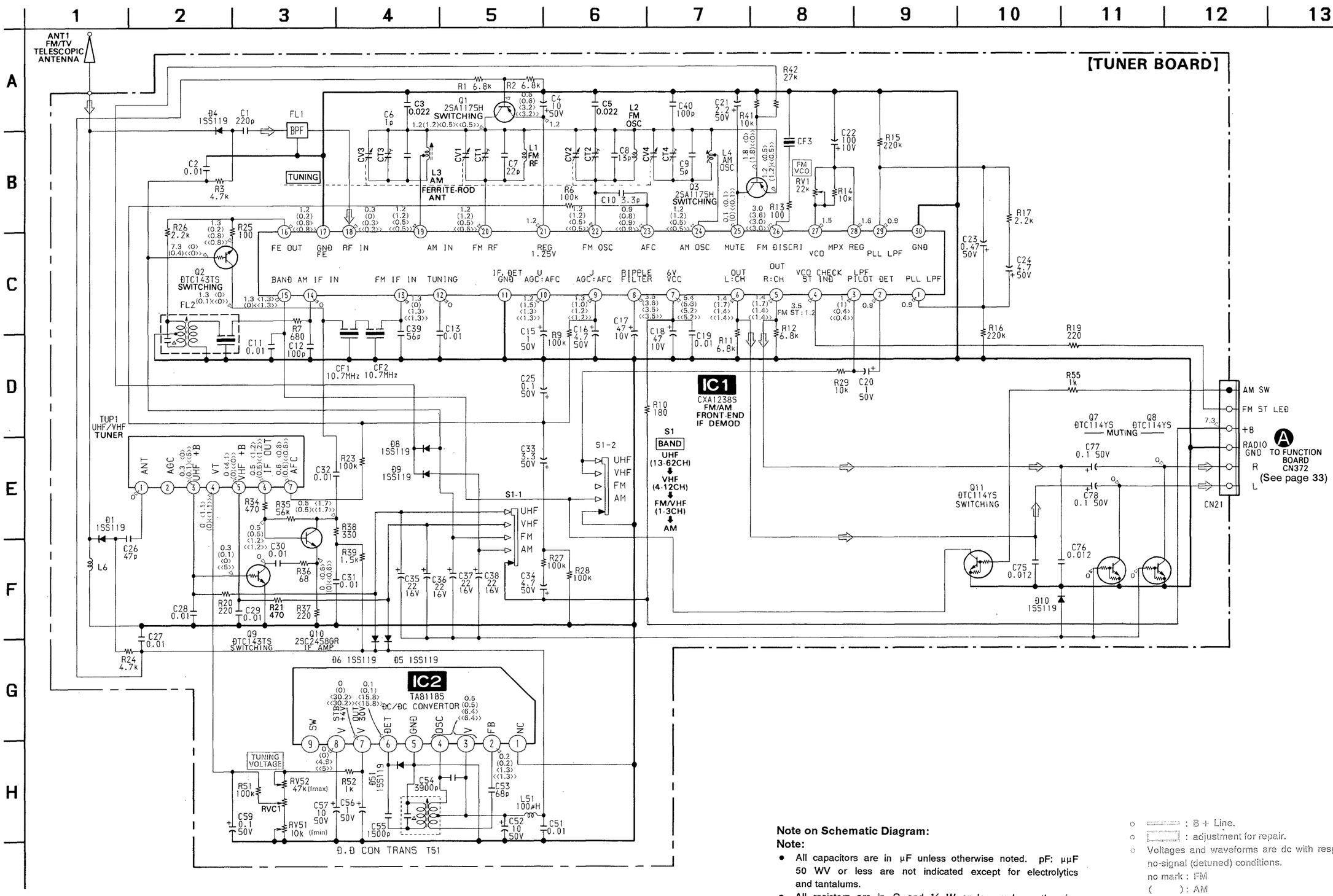
Ref. No.	Location
D1	I-11
D4	H-11
D5	I-10
D6	I-10
D8	I-6
D9	I-6
D10	G-4
D51	H-5
IC1	D-8
IC2	G-5
Q1	E-8
Q2	E-10
Q3	G-7
Q7	F-4
Q8	F-3
Q9	C-12
Q10	D-11
Q11	C-10

• ⬚ indicates side identified with part number.

• IC Block Diagram

IC1 CXA1238S



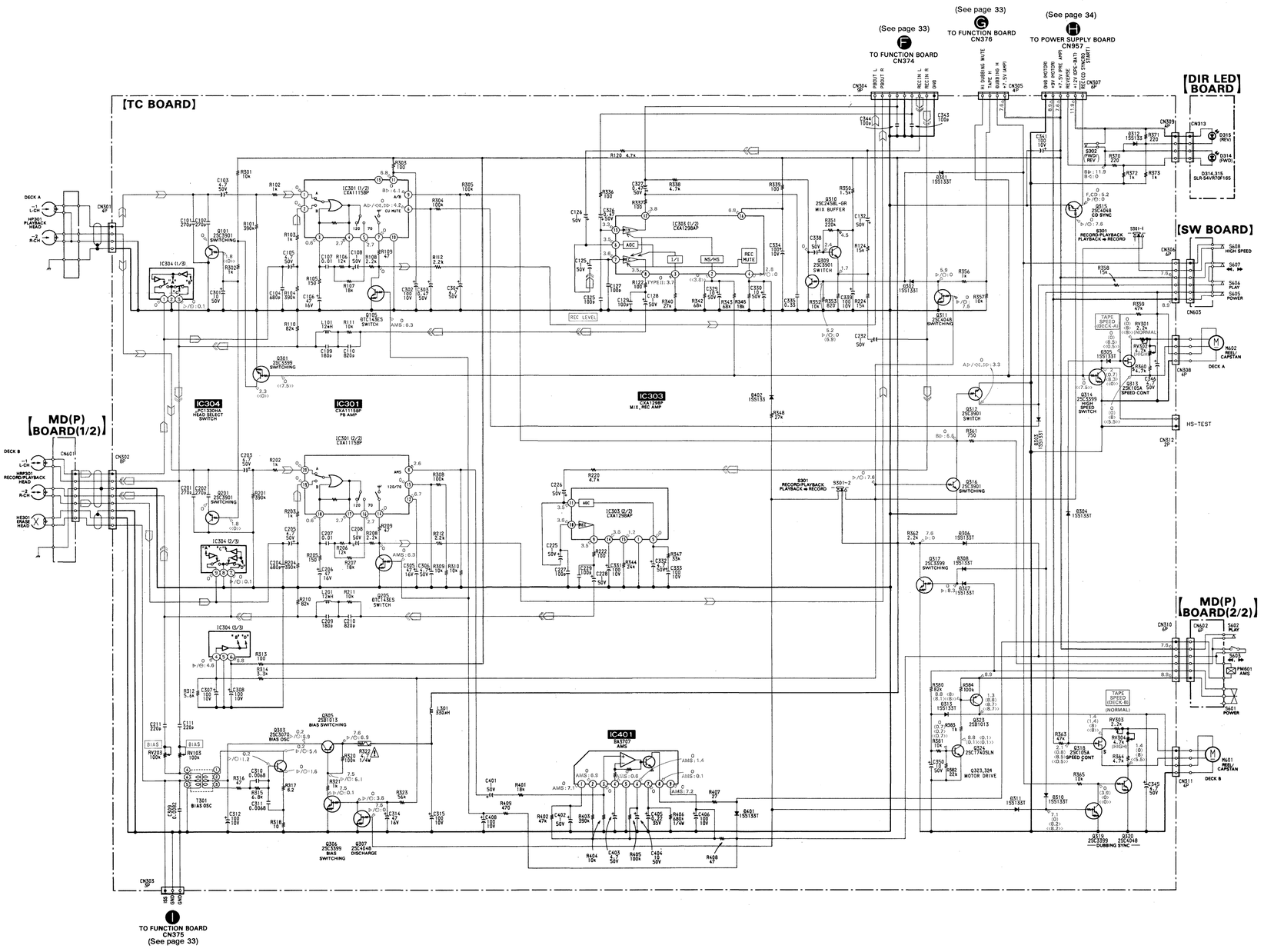


Note on Schematic Diagram:

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.

- ▭▭▭ : B + Line.
- ▭▭▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  - no mark : FM
  - ( ) : AM
  - < > : VHF
  - ≪ ≫ : UHF
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM


[TC BOARD]
[MD(P) BOARD(1/2)]
[DIR LED] BOARD
[SW BOARD]
[MD(P) BOARD(2/2)]
IC304 CXA1158P HEAD SELECT SWITCH
IC301 CXA1158P PB AMP
IC303 CXA1298P MIX, REC AMP
IC401 BA3707 AMS
IC501 (1/2) CXA1158P
IC501 (2/2) CXA1158P
IC501 (1/2) CXA1298P
IC305 (2/2) CXA1298P
IC304 (1/3)
IC304 (2/3)
IC304 (3/3)
(See page 33) TO FUNCTION BOARD CN374
(See page 33) TO FUNCTION BOARD CN376
(See page 34) TO POWER SUPPLY BOARD CN957
TO FUNCTION BOARD CN375 (See page 33)
DECK A
DECK B
HP301 PLAYBACK HEAD
HP302 RECORD/PLAYBACK HEAD
HE301 ERASE HEAD
M602 REEL/CAPSTAN
M601 REEL/CAPSTAN
S608 HIGH SPEED
S607 PLAY
S606 PLAY
S605 POWER
S602 PLAY
S603 POWER
S601 POWER
D315 (REV)
D314 (FWD)
D314,315 SLR-54VR70F105
S301 RECORD/PLAYBACK ⇔ RECORD
S501-1 S501-2
TAPE SPEED (DECK-A)
TAPE SPEED (DECK-B)
(NORMAL)
(HIGH)
HS-TEST
SPEED CONT
HIGH SPEED SWITCH
MOTOR DRIVE
DUBBING SYNC
BIAS OSC
BIAS SWITCHING
DISCHARGE
MUTE
SWITCHING
MIX BUFFER
REC MUTE
REC LEVEL
TYPE I/II
NS/HS
ASC
REC
AMS
CU MUTE
Note on Schematic Diagram:
Note:
• All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
• All resistors are in Ω and ¼ W or less unless otherwise specified.
• : nonflammable resistor.
• : fusible resistor.
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
: B + Line.
: adjustment for repair.
Total current is measured with no cassette installed.
Voltage is dc 12 V and fed with regurated dc power supply from battery terminal.
no mark : STOP
▷ : FWD ▷/◁ : REC
Voltages are taken with a VOM (10 MΩ/V). Voltage variations may be noted due to normal production tolerances.
Signal path.
: FM : PB (DECK A)
: CD : PB (DECK B)
: REC (DECK B)

5-5. CONTROL, AMP, POWER SUPPLY SECTION SCHEMATIC DIAGRAM

• See page 29 for notes.

[ECHO BOARD]

[ST LED BOARD]

[MIC BOARD]

[FUNCTION BOARD]

[POWER BOARD]

[SP TERMINAL BOARD]

[VOL SEL BOARD]

[POWER SUPPLY BOARD]

TO RADIO BOARD CN21 (See page 28)

TO CD MAIN BOARD CN705 (See page 45)

TO TC BOARD CN304 (See page 31)

TO TC BOARD CN303 (See page 29)

TO TC BOARD CN305 (See page 31)

TO CD MAIN BOARD CN704 (See page 44)

TO TC BOARD CN307 (See page 31)

TO CD CONTROL BOARD CN806 (See page 44)

• Semiconductor Lead Layouts

BA178M05

BA4558N

M501975

(Top view)

2SC1740SLN-RS
2SC4046
2SC4363
2SC634SP
DTA114TS
DTA114YS
DTC124ES
DTC143ES
DTC143TS
DTC144ES

2SB1370E

2SK105A-30

EBR5334S

cathode anode

CXA1115BP

PST529J

1SS119
RD3.6ES-B1
RD4.7ES-B2
RD6.2ES-L1
RD8.2ES-B3

cathode anode

2SD1944-K

CXA1298AP

2SB1013-4
2SB1068-K
2SC2001-LK
2SC3070

2SD774-34

BA3707
μPC1330HA

LA4630-N

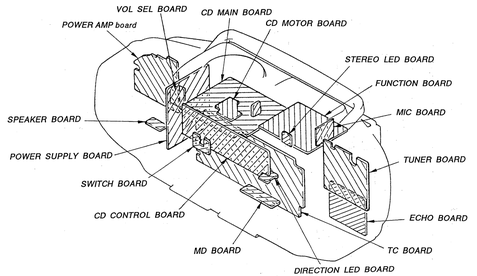
S5VB10-39

2SA1175-HFE
2SD1021
2SC2458L-GR
2SC2785-HFE

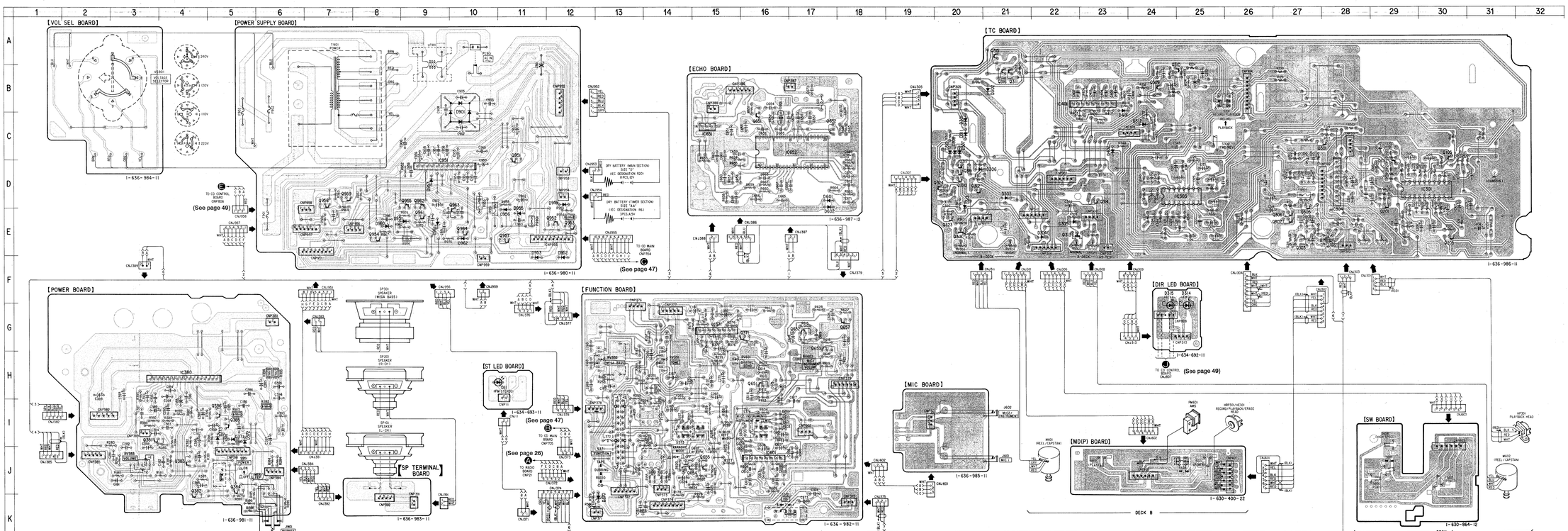
letter side

BA3924

• Circuit Boards Location



5-6. TAPE RECORDER, CONTROL, AMP, POWER SUPPLY SECTION PRINTED WIRING BOARDS



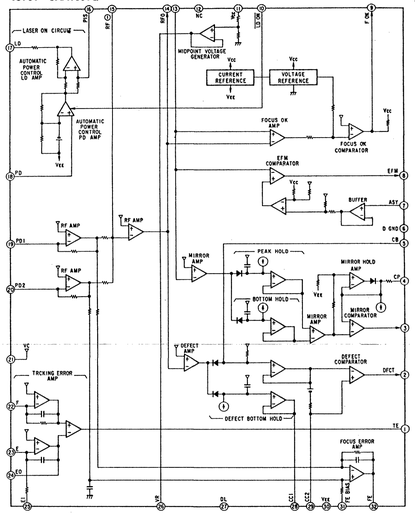
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D11	H-10	Q201	D-29
D301	C-20	Q205	E-30
D302	B-21	Q301	C-28
D303	D-21	Q303	E-27
D304	E-22	Q305	D-27
D305	E-22	Q306	E-27
D306	D-20	Q307	E-27
D307	C-20	Q309	B-24
D308	C-20	Q310	B-24
D310	C-20	Q311	B-21
D311	C-20	Q312	D-20
D312	C-24	Q313	E-22
D313	D-20	Q314	D-23
D314	G-25	Q315	A-21
D315	C-24	Q316	B-21
D370	K-13	Q317	D-20
D371	I-5	Q318	E-20
D372	I-5	Q319	D-20
D373	I-5	Q320	D-20
D401	B-23	Q323	E-20
D402	C-23	Q324	D-20
D601	D-17	Q371	G-16
D602	D-17	Q381	I-3
D901	C-10	Q382	J-4
D951	E-9	Q383	J-4
D952	F-12	Q384	J-5
D953	F-11	Q385	I-5
D955	E-11	Q386	I-5
D956	E-11	Q651 (FUNCTION)	H-16
D957	D-9	Q651 (ECHO)	C-16
D959	D-12	Q652 (FUNCTION)	G-17
D960	E-8	Q652 (ECHO)	C-17
D961	E-9	Q653	G-17
D962	E-10	Q654	J-14
		Q655	J-15
IC301	D-30	Q657	G-18
IC303	D-25	Q951	C-11
IC304	D-28	Q952	E-12
IC371	G-15	Q953	E-12
IC380	H-4	Q954	E-8
IC401	B-23	Q955	D-9
IC601	J-16	Q957	E-11
IC651	C-15	Q958	D-7
IC652	C-17	Q959	D-7
IC951	D-9	Q961	E-8
		Q962	D-9
Q101	D-29	Q963	E-10
Q105	D-30	Q964	E-10

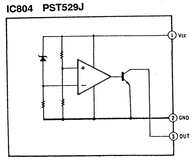
Note:
- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.

• IC Block Diagram

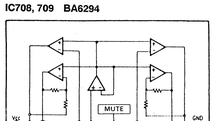
IC701 CXA1081Q



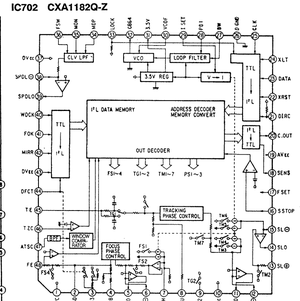
IC804 PST529J



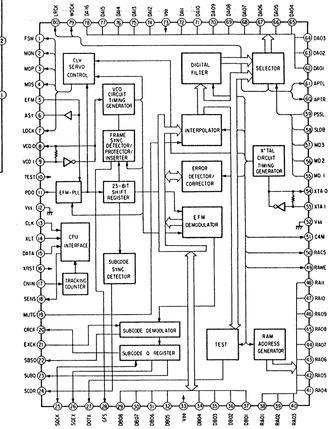
IC708, 709 BA6294



IC702 CXA1182Q-Z



IC703 CXD1130Q



Note on Schematic Diagram:
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- : fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- : B + Line.
- : adjustment for repair.
- Power voltage is dc V and fed with regurated dc power supply from external power voltage jack.
- Power voltage is dc 12 V and fed with regurated dc power supply from battery terminal.
  no mark : STOP
  ( ) : PLAY
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : CD

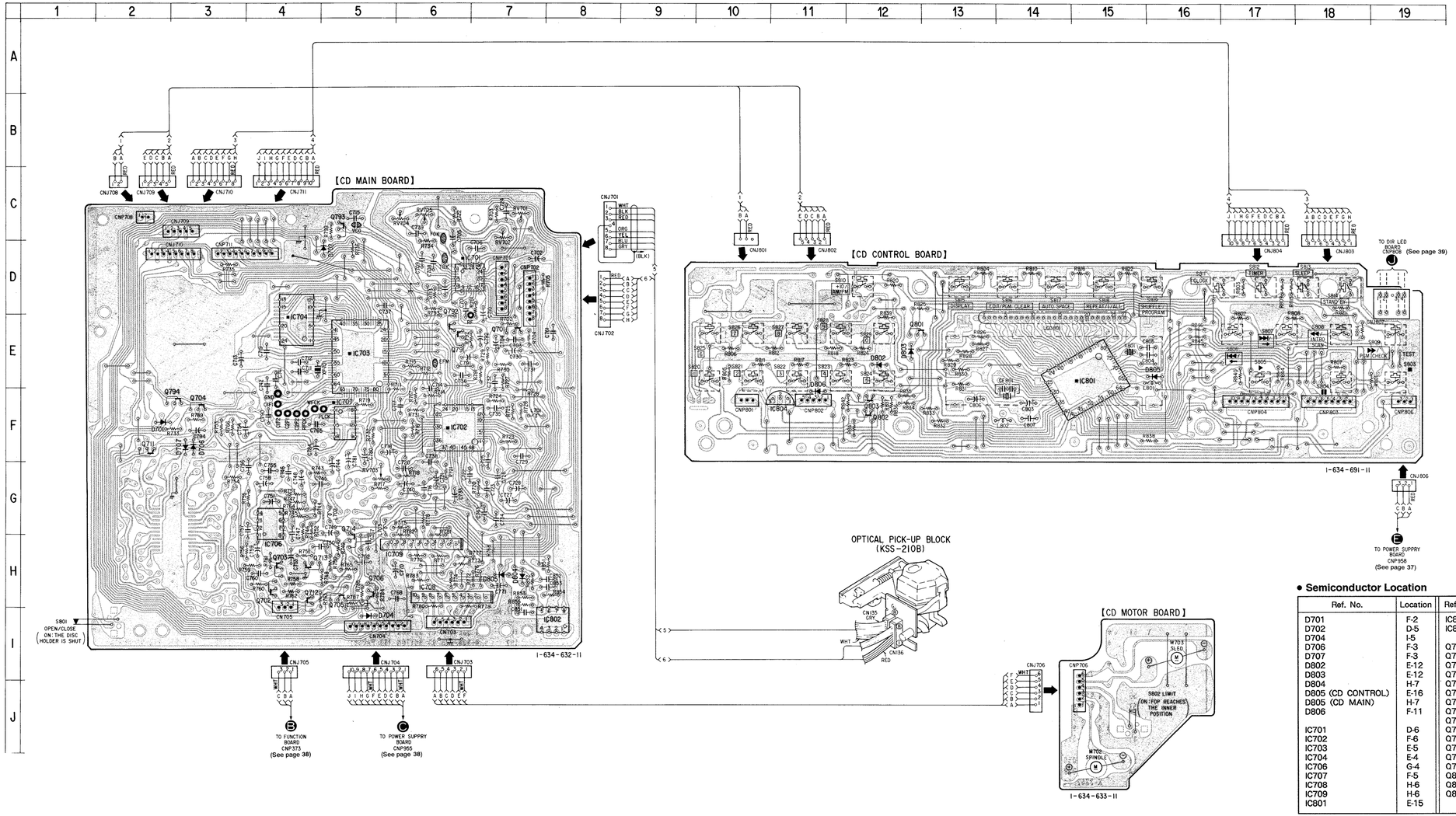
TO POWER SUPPLY BOARD (See page 34)
CN958

[CD CONTROL BOARD]

[CD MAIN BOARD]

[CD MOTOR BOARD]

TO FUNCTION BOARD CN973 (See page 33)
TO POWER SUPPLY BOARD CN955 (See page 34)


【CD MAIN BOARD】
【CD CONTROL BOARD】
【CD MOTOR BOARD】
OPTICAL PICK-UP BLOCK (KSS-210B)
I-634-632-11
I-634-691-11
I-634-633-11
S801 OPEN/CLOSE ON THE DISC HOLDER IS SHUT
TO FUNCTION BOARD CNP373 (See page 38)
TO POWER SUPPRY BOARD CNP955 (See page 38)
TO DIR LED BOARD CNP808 (See page 39)
TO POWER SUPPRY BOARD CNP958 (See page 37)
S802 LIMIT SW (ON:TOP REACHES THE INNER POSITION)

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D701	F-2	IC802	I-8
D702	D-5	IC804	F-11
D704	I-5		
D706	F-3	Q701	E-7
D707	F-3	Q702	H-4
D802	E-12	Q703	H-4
D803	E-12	Q704	F-3
D804	H-7	Q705	H-5
D805 (CD CONTROL)	E-16	Q706	H-5
D805 (CD MAIN)	H-7	Q711	F-2
D806	F-11	Q712	H-4
		Q713	H-4
IC701	D-6	Q714	H-5
IC702	F-6	Q791	E-6
IC703	E-5	Q792	E-6
IC704	E-4	Q793	C-5
IC706	G-4	Q794	F-3
IC707	F-5	Q801	E-12
IC708	H-6	Q802	F-12
IC709	H-6	Q803	F-12
IC801	E-15		

• Semiconductor Lead Layouts

BA6294

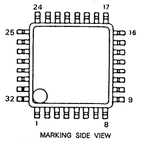
MARKING SIDE VIEW

CXK5816M-12L

(Top view)

1SS119

CXA1081Q



MARKING SIDE VIEW

NJM2100D
RC4558P

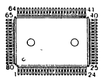
(Top view)

PST529J

CXA1182Q-Z

2SA1175-HFE

CXD1130Q
CXP5078-048Q



MARKING SIDE VIEW

2SB1013-4

μPD6376

(TOP VIEW)

2SA933S-QR
DTA114YS
DTA124ES
DTC124ES
DTC143TS
2SC1740S-QR
2SC4048

Note:

- ○——: parts extracted from the component side.
- ■: parts mounted on the conductor side.
- ○—○: Jumper wire connected to the ground pattern on the component side.

SECTION 6
EXPLODED VIEWS

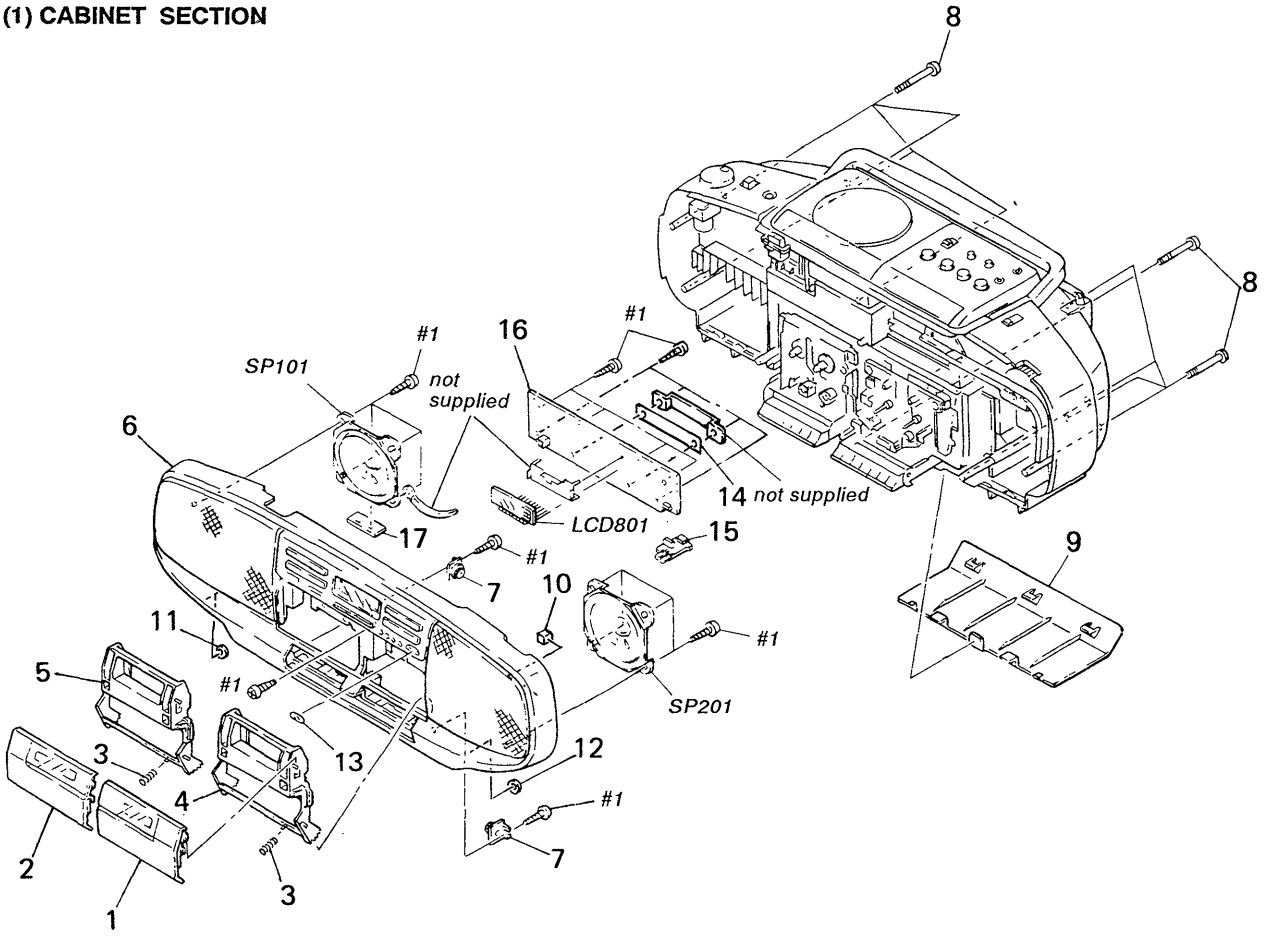
NOTE:

- -XX and -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

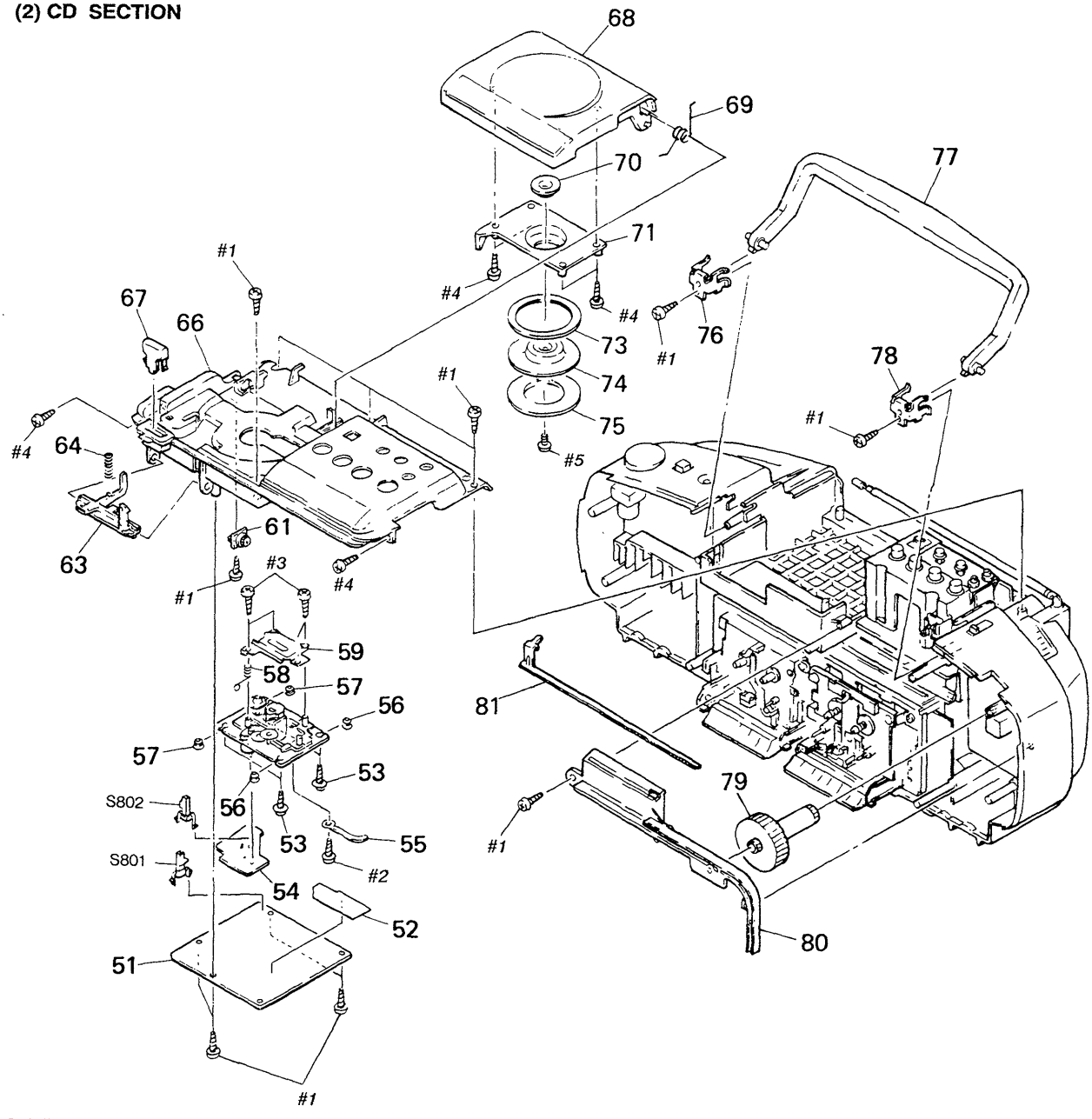
- E2: AC120V ZONE
  E3: AC240V ZONE
  JE: Tourist

(1) CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	X-3362-234-1	LID (B) ASSY, CASSETTE	
2	X-3362-233-1	LID (A) ASSY, CASSETTE	
3	4-936-099-01	SPRING, COMPRESSION	
4	4-937-021-01	HOLDER, CASSETTE	
5	3-366-198-01	HOLDER (A), CASSETTE	
6	X-3362-647-1	CABINET (FRONT) SUB ASSY	
7	3-351-377-11	DAMPER	
8	4-926-715-01	SCREW (3X62), TAPPING	
9	4-937-029-01	LID, BATTERY CASE	
10	*3-575-485-01	RUBBER	
11	4-932-613-01	WASHER, DIA.3	
12	3-350-686-01	WASHER	
13	4-936-065-01	PLATE (DIR), TRANSPARENT	
14	* 4-937-055-02	INSULATOR	
15	* 1-634-692-11	DIRECTION LED BOARD	
16	*A-3261-325-A	CD CTRL BOARD, COMPLETE	
17	* 1-636-983-11	SPEAKER BOARD	
LCD801	1-808-973-11	DISPLAY PANEL, LIQUID CRYSTAL	
SP101	1-544-142-11	SPEAKER	
SP201	1-544-142-11	SPEAKER	

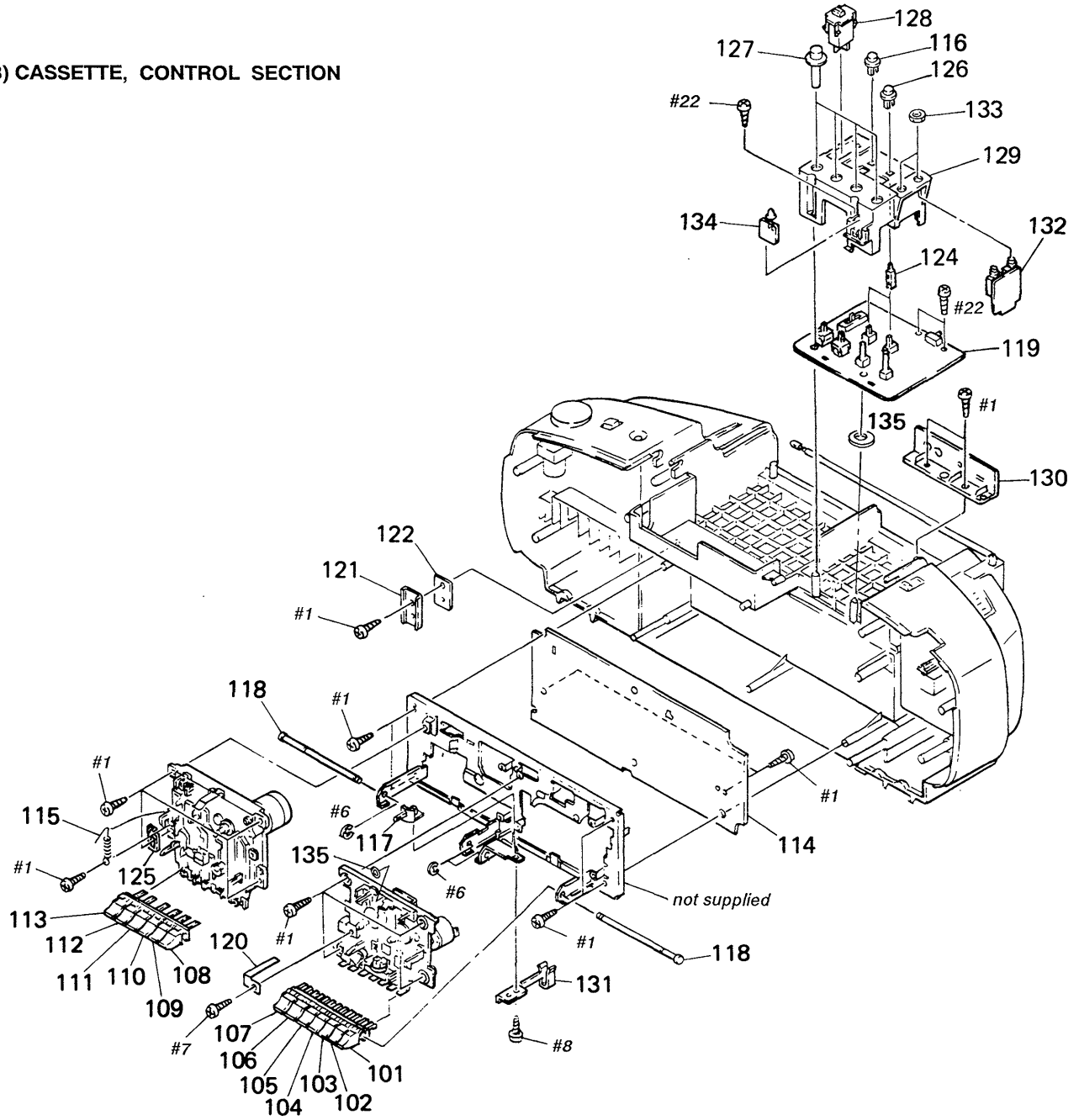
(2) CD SECTION



Ref. No.	Part No.	Description	Remark
51	* A-3222-018-A	CD MAIN BOARD, COMPLETE	
52	* 4-930-246-11	PAPER (N), SHIELD	
53	4-931-373-01	SCREW, CD FITTING	
54	* 1-634-633-11	CD MOTOR BOARD	
55	* 3-701-822-00	HOLDER, WIRE	
56	4-922-858-01	DAMPER	
57	4-922-858-11	DAMPER	
58	4-931-358-01	SPRING	
59	* 4-928-936-01	COVER, CD	
61	3-351-377-11	DAMPER	
63	4-936-059-01	CLAW, LOCK	
64	4-936-099-01	SPRING, COMPRESSION	
66	X-3362-649-1	CABINET (UPPER) SUB ASSY	
67	4-936-058-01	BUTTON (CD OPEN)	
68	X-3362-648-1	LID SUB ASSY, CD	

Ref. No.	Part No.	Description	Remark
69	4-937-048-01	SPRING (CD), UP	
70	X-4918-291-1	MAGNET (B) ASSY	
71	4-937-014-01	BRACKET (CHUCK PLATE)	
73	4-923-370-01	WASHER (CD)	
74	4-919-973-01	PLATE (C), CHUCK	
75	4-919-972-01	WASHER	
76	* 4-936-087-01	RETAINER (B) (HANDLE)	
77	4-937-022-01	HANDLE	
78	* 4-936-086-01	RETAINER (A) (HANDLE)	
79	4-937-002-01	KNOB (TUNE)	
80	* 4-937-020-01	CHASSIS (TUNE)	
81	4-937-001-01	POINTER	
S801	1-570-822-21	SWITCH, LEAF (OPEN/CLOSE)	
S802	1-571-936-11	SWITCH, LEAF (LIMIT)	

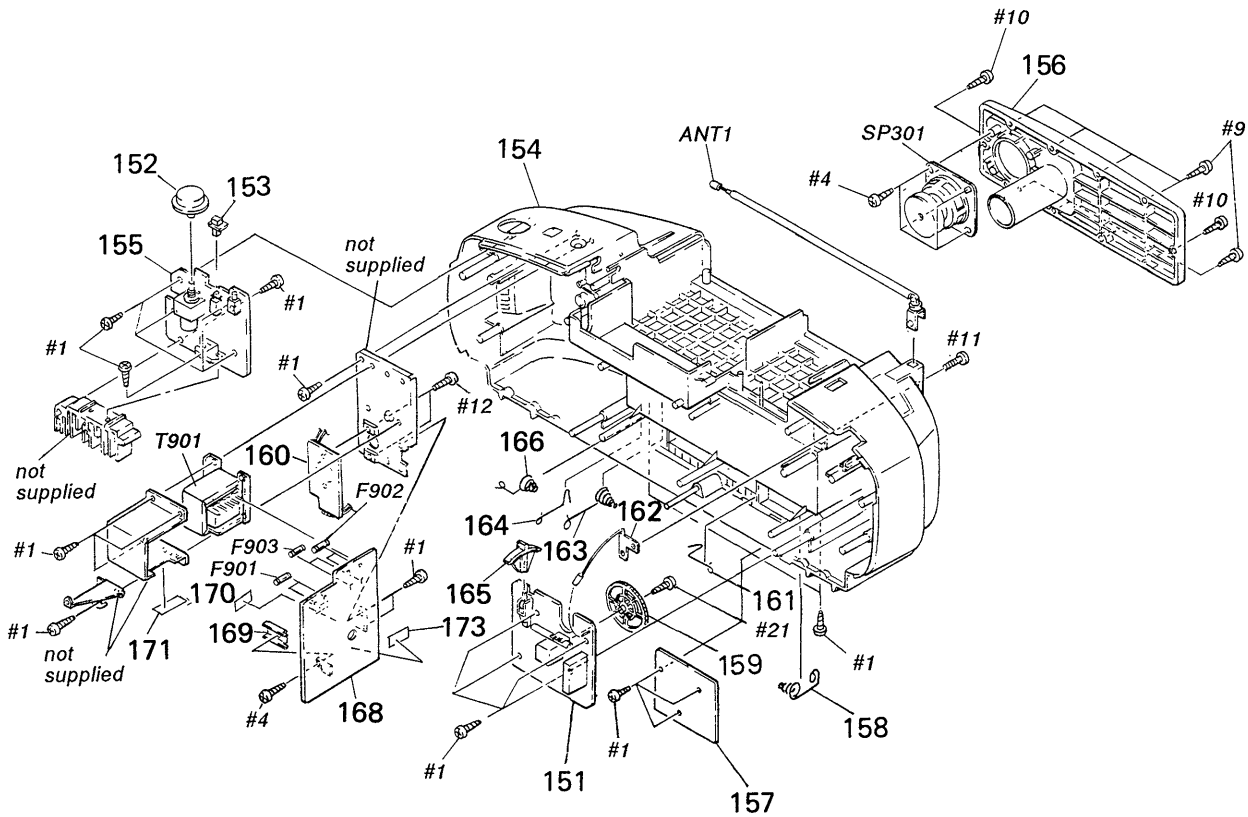
(3) CASSETTE, CONTROL SECTION



Ref. No.	Part No.	Description	Remark
101	4-936-074-01	BUTTON (33, STOP)	
102	4-936-073-01	BUTTON (33, PAUSE)	
103	4-936-072-01	BUTTON (33, FF)	
104	4-936-071-01	BUTTON (33, REW)	
105	4-936-070-01	BUTTON (33, PLAY)	
106	4-936-069-01	BUTTON (33, REC)	
107	4-936-068-01	BUTTON (33, DIR)	
108	4-936-080-01	BUTTON (45, PAUSE)	
109	4-936-079-01	BUTTON (45, FF)	
110	4-936-078-01	BUTTON (45, REW)	
111	4-936-077-01	BUTTON (45, PLAY)	
112	4-936-076-01	BUTTON (45, DUBB)	
113	4-936-075-01	BUTTON (45, STOP)	
114	* A-3261-332-A	TC BOARD, COMPLETE	
115	4-930-269-01	SPRING, TENSION(D)	
116	4-936-055-11	BOTTON (SPACE)	
117	4-936-060-01	KNOB (DIR)	
118	* 4-937-034-01	SHAFT (BUTTON)	

Ref. No.	Part No.	Description	Remark
119	* A-3261-328-A	FUNCTION BOARD, COMPLETE	
120	* 4-930-912-01	SPRING	
121	* 4-937-038-01	RETAINER (CORD)	
122	* 4-937-039-01	CUSHION (CORD)	
124	4-936-053-01	SHAFT, RELAY	
125	* 4-937-054-01	GUIDE, LEVER	
126	4-936-055-01	BOTTON (SPACE)	
127	4-936-057-11	KNOB (ROTARY)	
128	4-936-056-01	KNOB (SLIDE)	
129	3-363-710-01	CHASSIS	
130	* 4-937-015-01	COVER, JACK	
131	4-936-061-01	LEVER (DIR)	
132	* 1-636-985-11	MICROPHONE BOARD	
133	3-684-465-01	NUT, HEXAGON	
134	* 1-634-693-11	STEREO LED BOARD	
135	3-350-686-01	WASHER	

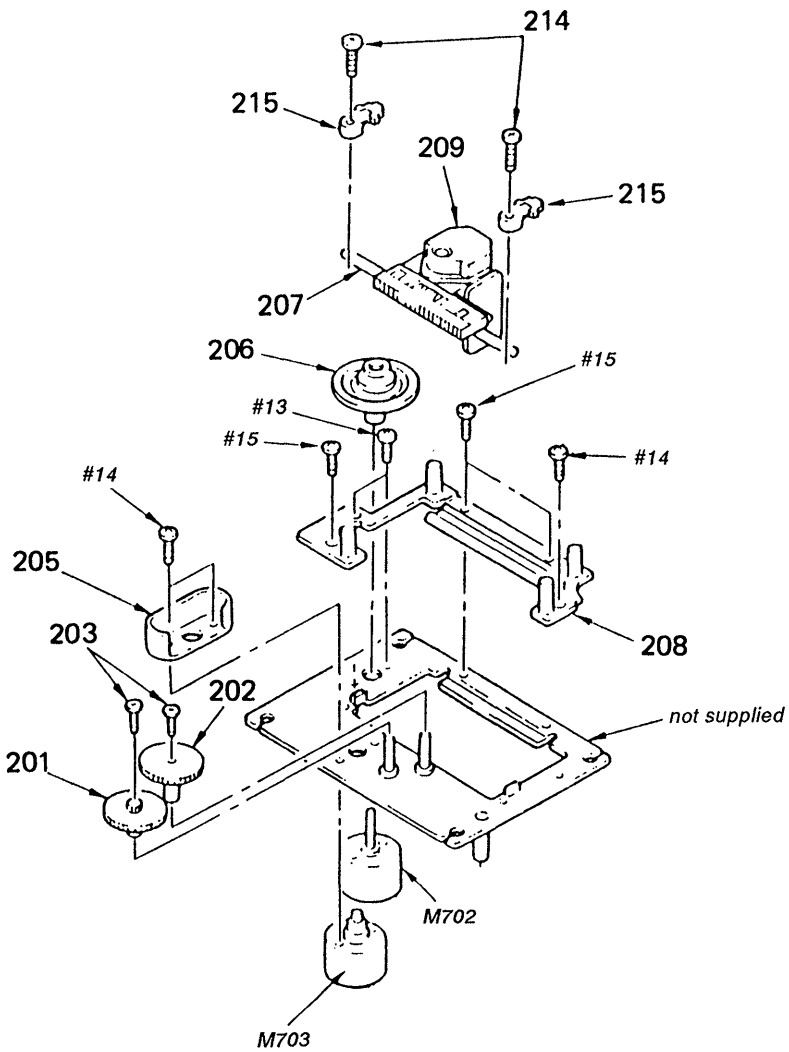
(4) CHASSIS, REAR CABINET SECTION



Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.		Part No.	Description	Remark
151	*	A-3266-619-A	TUNER BOARD, COMPLETE	
152		4-936-051-01	KNOB (VOL)	
153		4-931-316-01	KNOB (POWER)	
154		4-937-026-11	CABINET (REAR)	
155	*	A-3261-330-A	POWER AMPLIFIER BOARD, COMPLETE	
156		X-4936-014-1	PANEL SUB ASSY, BACK	
157	*	A-3261-331-A	ECHO BOARD, COMPLETE	
158		4-936-094-01	TERMINAL (D+-), BATTERY	
159		4-936-062-01	DRUM, TUNING CAPACITOR	
160	*	1-636-984-11	VOLTAGE SELECTION BOARD	
161		4-936-097-01	TERMINAL (AA+), BATTERY	
162	*	4-936-088-01	TERMINAL, ANTENNA	
163		4-936-096-01	TERMINAL (D-), BATTERY	
164		4-936-095-01	TERMINAL (D+), BATTERY	
165		4-937-003-01	KNOB (BAND)	
166		4-936-098-01	TERMINAL (AA-), BATTERY	
168	*	A-3261-416-A	POWER SUPPLY BOARD, COMPLETE	
169	*	4-880-403-11	HEAT SINK	
170		3-701-947-18	LABEL (T5A), FUSE	
171		3-362-039-01	INSULATOR (T)	
173		9-911-841-XX	CUSHION	
ANT1		1-501-375-11	ANTENNA, TELESCOPIC	
F901	⚠	1-532-299-00	FUSE, TIME-LAG (5A 250V)	
F902	⚠	1-532-066-00	FUSE, TIME-LAG (400mA 250V)	
F903	⚠	1-532-066-00	FUSE, TIME-LAG (400mA 250V)	
SP301		1-544-143-11	SPEAKER	
T901	⚠	1-450-207-11	TRANSFORMER, POWER	

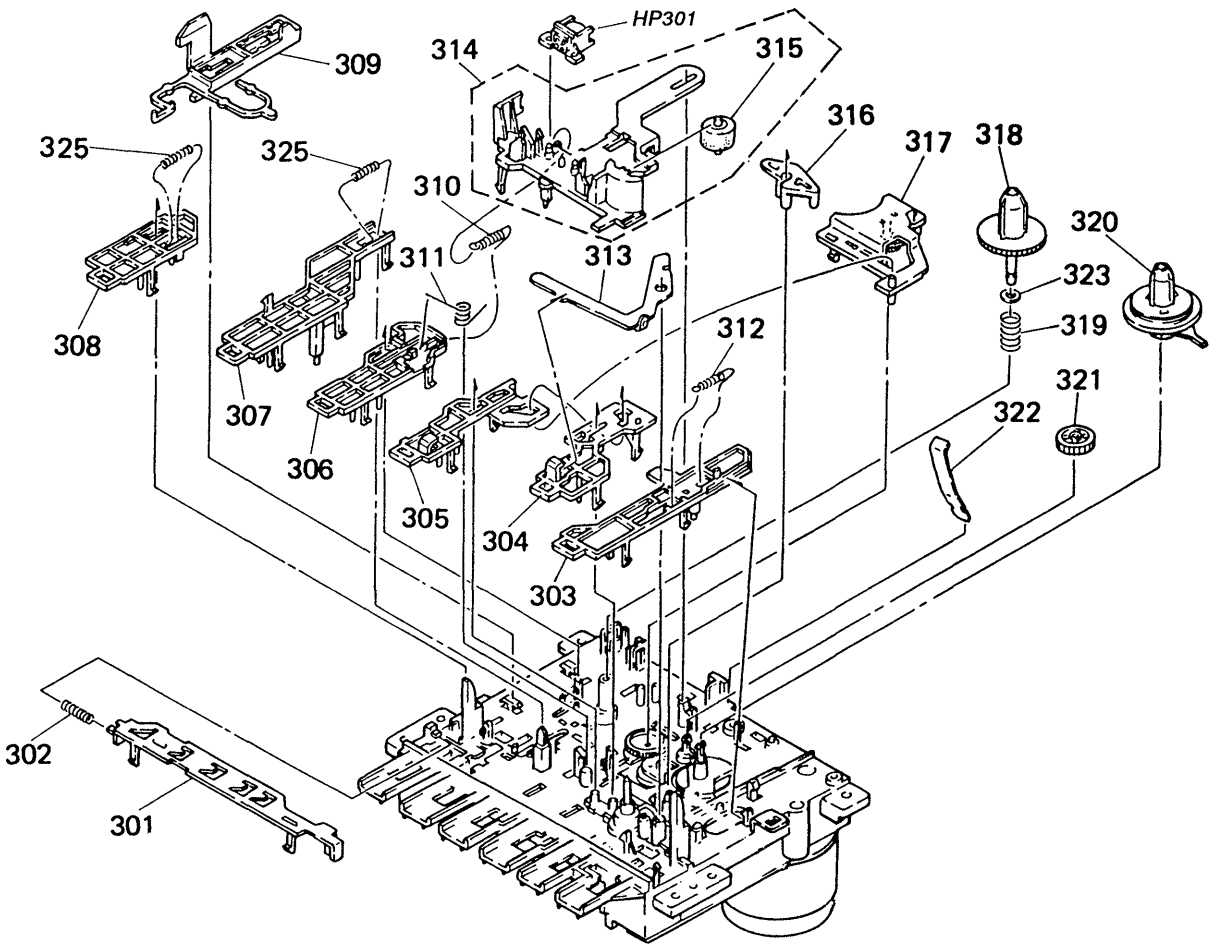
(5) OPTICAL PICKUP BLOCK SECTION (KSM-210BAN)



Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

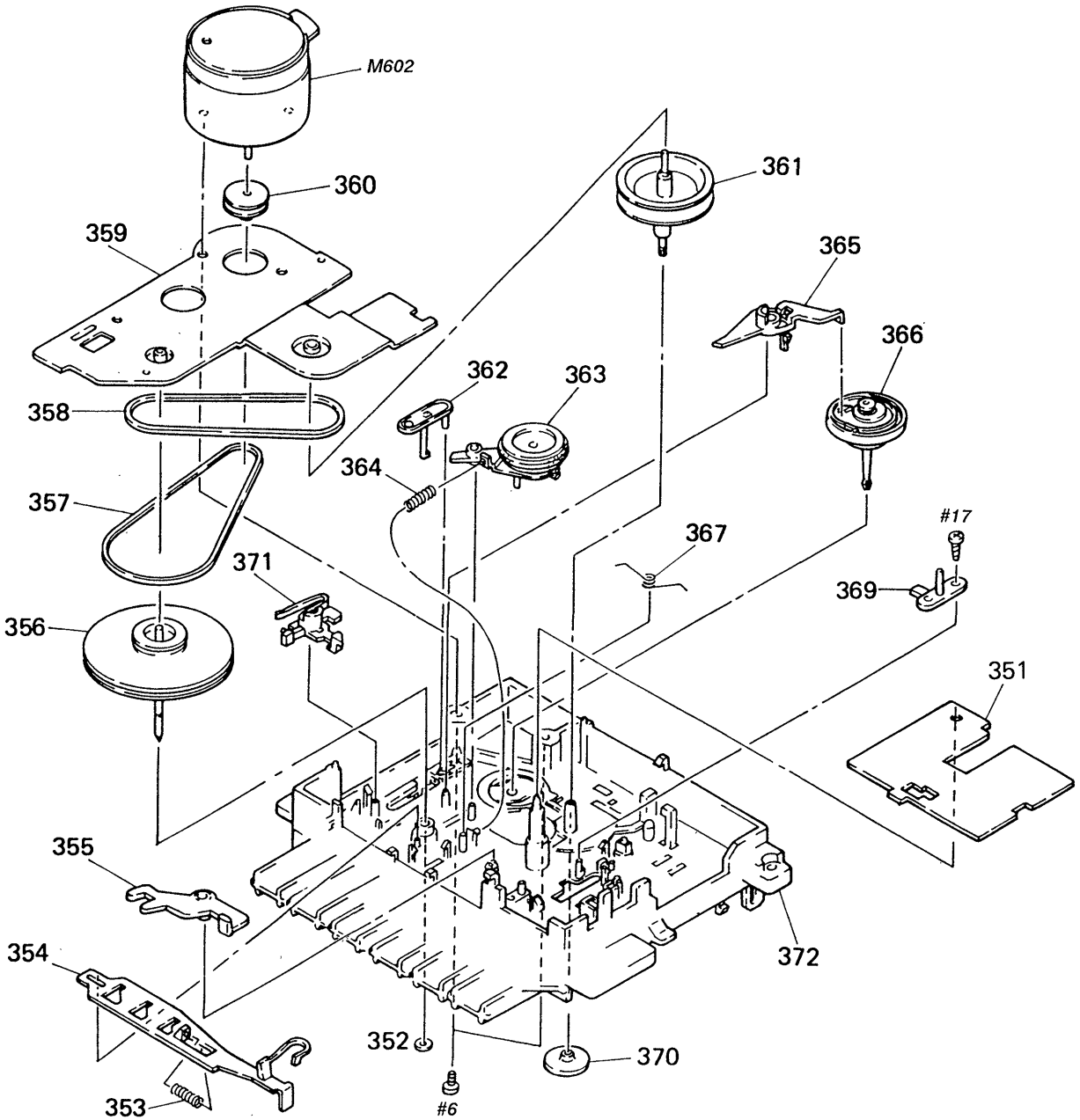
Ref. No.	Part No.	Description	Remark
201	2-641-403-05	GEAR (B)	
202	2-641-404-02	GEAR (A)	
203	3-303-809-31	SCREW (M1.7X3.0), SPECIAL HEAD	
205	* 2-641-434-01	COVER, GEAR	
206	X-2640-771-1	TURNTABLE ASSY (RP)	
207	* 4-910-431-01	SHAFT, SLIDE	
208	2-641-444-01	HOLDER, CHASSIS	
209	⚠ 8-848-137-11	DEVICE, OPTICAL KSS-210B	
214	2-641-447-01	SCREW (2.6X8), + STP	
215	2-641-448-02	CLAMP, SHAFT	
M702	1-541-352-11	MOTOR (SPINDLE)	
M703	X-2641-357-1	MOTOR ASSY, SLED (WITH GEAR)	

(6) DECK A TAPE TRANSPORT MECHANISM-1 (MF-DW-87-64)



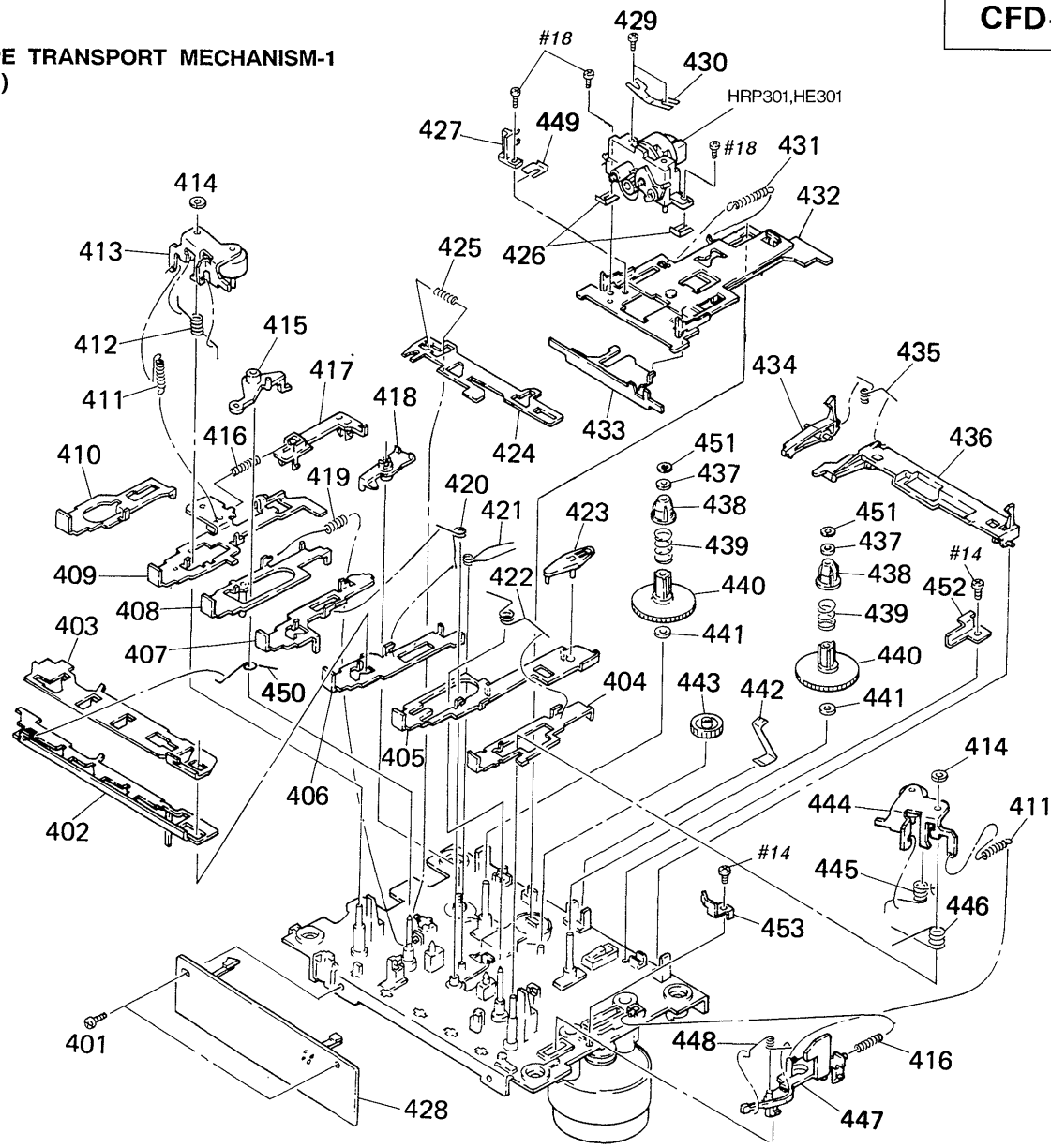
Ref. No.	Part No.	Description	Remark
301	4-928-995-01	SLIDER, LOCK	
302	4-932-656-01	SPRING, COMPRESSION	
303	4-928-994-01	LEVER, PAUSE	
304	4-928-993-01	LEVER, FF	
305	4-928-992-01	LEVER, REW	
306	4-928-991-01	LEVER, PLAY	
307	4-921-195-01	LEVER (AC), REC	
308	4-928-985-01	LEVER, STOP	
309	4-936-206-01	SLIDER (S), EJECT	
310	4-928-972-01	SPRING, TENSION	
311	4-928-973-01	SPRING	
312	3-313-372-01	SPRING, TENSION	
313	* 4-928-984-01	LEVER (D)	
314	X-4920-345-1	BASE (S) ASSY, HEAD	
315	4-928-962-01	PINCH ROLLER	
316	4-928-982-01	LEVER (C)	
317	X-4920-347-1	LEVER (S) ASSY, FR	
318	4-928-978-01	GEAR (C), SUPPLY REEL	
319	3-343-381-01	SPRING, COMPRESSION	
320	X-4920-350-1	GEAR (S) ASSY, T REEL	
321	3-343-285-01	GEAR, FF	
322	4-928-957-01	RETAINER, CASSETTE	
323	4-931-795-11	WASHER	
325	4-932-648-01	SPRING, COMPRESSION	
HP301	1-543-715-11	HEAD, MAGNETIC (REC/PB)	

(7) DECK A TAPE TRANSPORT MECHANISM-2 (MF-DW-87-64)



Ref. No.	Part No.	Description	Remark
351	* 1-630-864-11	SWITCH BOARD	
352	3-343-358-01	RING, RETAINING	
353	4-932-656-01	SPRING, COMPRESSION	
354	4-928-996-01	LEVER, SW	
355	4-932-672-02	LEVER (S), FR SW	
356	X-4918-576-1	WHEEL (C) ASSY, CAPSTAN	
357	3-453-112-00	BELT (CAPSTAN)	
358	4-928-974-01	BELT (MIDWAY)	
359	* X-4918-598-1	PLATE ASSY, GROUND	
360	X-3326-704-1	PULLEY (H), MOTOR	
361	X-4918-580-1	PULLEY ASSY, FR	
362	4-928-961-01	PLATE, PAUSE LOCK	
363	X-4920-346-1	LEVER (S) ASSY, IDLER	
364	4-932-655-01	SPRING, COMPRESSION	
365	4-928-986-01	LEVER (S), SHUT-OFF	
366	X-4918-582-1	PLATE ASSY, TAKE-UP REEL	
367	4-928-958-01	SPRING, FR RETURN	
369	4-928-976-01	LEVER, SW	
370	4-928-967-01	GEAR (C), MIDWAY	
371	4-928-987-01	LEVER (T), SHUT-OFF	
372	X-4920-348-1	CHASSIS (S) ASSY, MECHANICAL	
M602	1-541-631-11	MOTOR, DC	

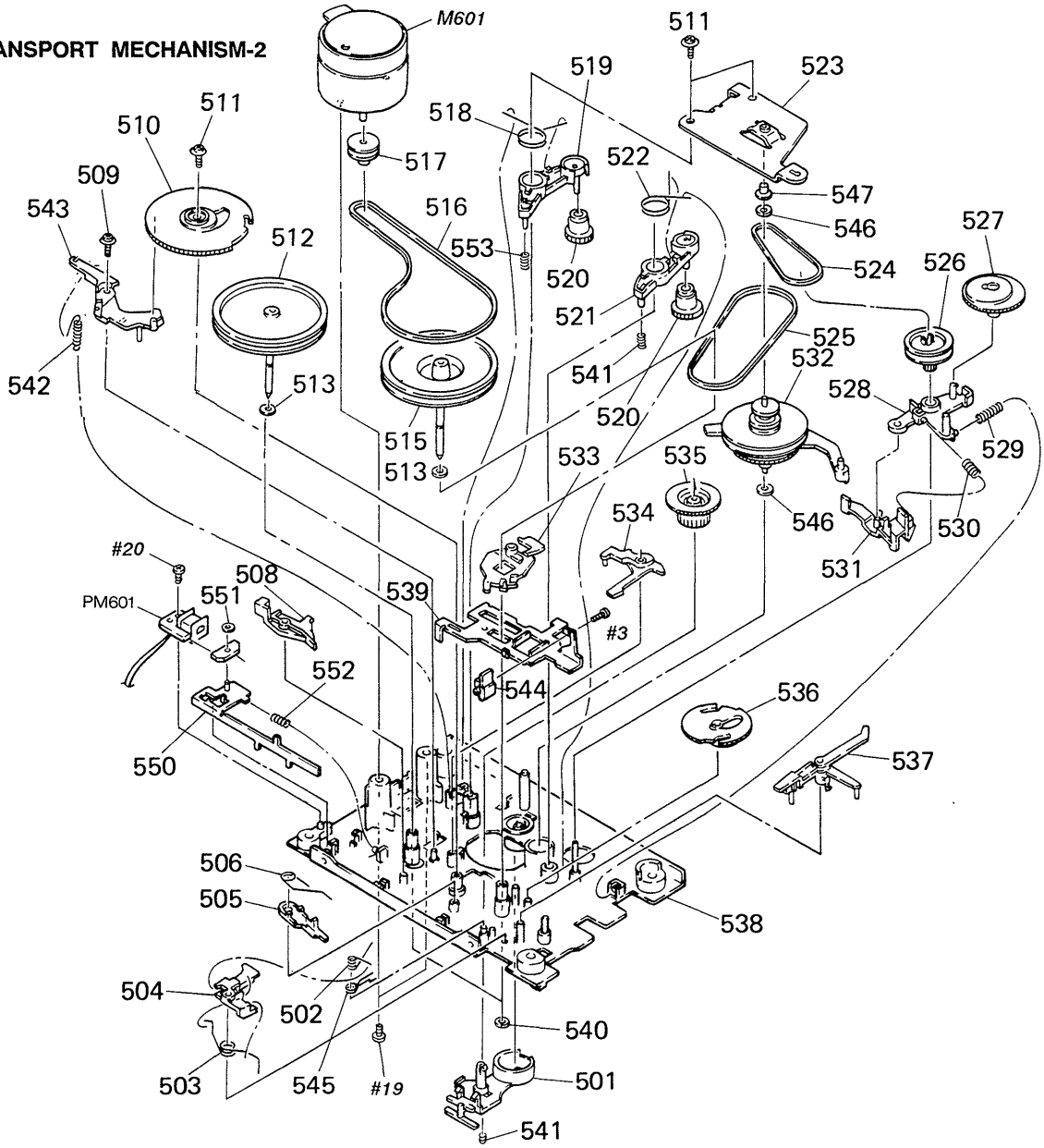
(8) DECK B TAPE TRANSPORT MECHANISM-1 (MF-300RP-63)



Ref. No.	Part No.	Description	Remark
401	3-342-917-11	SCREW (IT3-C), TAPPING, + B	
402	* 4-930-461-01	LEVER, SW	
403	* 4-930-460-01	PLATE (AWS), LOCK	
404	* 4-930-455-11	LEVER, STOP	
405	* 4-930-458-11	LEVER, PAUSE	
406	* 4-930-482-11	LEVER (A), FF	
407	* 4-930-454-11	LEVER (A), REW	
408	* X-4918-591-1	LEVER ASSY, FWD	
409	* 4-930-459-11	LEVER, REC	
410	* 4-930-456-11	LEVER, DIRECTION	
411	4-930-450-01	SPRING, TENSION	
412	4-930-434-01	SPRING (R)	
413	X-4918-589-1	PINCH ARM (R) ASSY	
414	* 4-920-369-01	RETAINER, THRUST	
415	4-930-417-01	LEVER, RELEASE, LOCK PLATE	
416	3-344-751-01	SPRING, COMPRESSION	
417	4-930-464-01	LEVER, DETECTION	
418	4-930-467-01	LEVER, CLAW DETECTION	
419	4-930-433-01	SPRING, COMPRESSION	
420	4-930-429-01	SPRING	
421	4-930-423-01	SPRING	
422	4-930-437-01	SPRING	
423	4-930-416-01	PLATE, LOCK, PAUSE	
424	* 4-930-457-01	LEVER, FR	
425	3-344-726-01	SPRING, COMPRESSION	
426	3-336-274-01	SHIM (t=0.1)	
426	3-336-274-11	SHIM (t=0.2)	
426	3-336-274-21	SHIM (t=0.3)	

Ref. No.	Part No.	Description	Remark
427	4-930-438-01	GUIDE, TAPE	
428	* 1-630-400-21	MD BOARD	
429	3-344-788-01	SCREW, AZIMUTH ADJUSTMENT	
430	4-930-440-01	SPRING	
431	4-932-696-01	SPRING, TENSION	
432	* X-4918-595-1	BASE ASSY, HEAD	
433	* 4-930-471-01	SLIDER, HD SELECTION	
434	4-930-481-01	CLAW (A), ERASING PROTECTION	
435	4-930-451-01	SPRING	
436	4-930-480-01	CLAW (B), ERASING PROTECTION	
437	3-701-437-01	WASHER	
438	4-930-408-01	CLAW, REEL	
439	4-931-747-01	SPRING, COMPRESSION	
440	4-930-407-01	TABLE, REEL	
441	4-932-605-11	WASHER	
442	4-930-422-01	RETAINER, CASSETTE	
443	4-930-409-01	GEAR, MIDWAY	
444	X-4918-590-1	PINCH ARM (F) ASSY	
445	4-930-435-01	SPRING (F)	
446	4-930-428-01	SPRING	
447	4-930-463-01	LEVER (B), EJECT	
448	4-930-453-01	SPRING	
449	4-932-603-01	SHIM (t=0.1)	
449	4-932-603-11	SHIM (t=0.2)	
450	4-931-770-01	SPRING	
451	4-932-626-11	RING, RETAINING	
452	* 4-932-661-01	PLATE, FIXED	
453	* 4-932-606-01	RETAINER (33)	
HE301 HRP301	A-3114-079-A	HEAD ASSY, ROTARY (REC/PB)	

(9) DECK B TAPE TRANSPORT MECHANISM-2 (MF-300RP-63)



Ref. No.	Part No.	Description	Remark
501	4-930-466-01	ARM, FWD	
502	4-932-645-01	SPRING (B)	
503	4-930-448-01	SPRING	
504	4-930-469-01	LEVER (A), DIRECTION	
505	4-930-465-01	LEVER, FWD LOCK	
506	4-931-748-01	SPRING	
508	4-930-415-01	LEVER, CR	
509	3-344-737-11	SCREW (B1.4X6), TAPPING	
510	4-930-476-01	GEAR, SET-UP	
511	3-344-729-01	SCREW (B2), TAPPING, WASHER HEAD	
512	X-4919-974-1	FLYWHEEL (F) ASSY	
513	3-701-437-81	WASHER	
515	X-4919-975-1	FLYWHEEL (R) ASSY	
516	3-337-704-01	BELT	
517	X-3344-021-1	PULLEY (W), MOTOR	
518	4-930-419-01	SPRING	
519	4-930-413-01	LEVER (B), FF	
520	4-930-411-01	GEAR (B), FR	
521	4-930-412-01	LEVER (B), REW	
522	4-930-420-01	SPRING	
523	* 4-930-969-01	BEARING, FR LIMITER	
524	3-306-816-00	BELT	
525	3-139-109-00	BELT	
526	3-344-098-01	GEAR, S	
527	4-930-475-01	GEAR, S CAM	
528	4-930-474-01	LEVER, SHUT-OFF DETECTION	

Ref. No.	Part No.	Description	Remark
529	3-344-751-01	SPRING, COMPRESSION	
530	3-344-060-01	SPRING, COMPRESSION	
531	4-930-468-01	LEVER, SHUT-OFF	
532	X-4918-586-1	LIMITER ASSY, FR	
533	4-930-470-01	LEVER (B), DIRECTION	
534	4-930-414-01	LEVER (B), PAUSE	
535	4-930-410-01	GEAR (B), FWD	
536	4-930-479-01	GEAR, D	
537	3-344-041-01	LEVER, MODE SELECTION	
538	X-4920-368-1	CHASSIS ASSY, MECHANICAL	
539	* 4-930-485-01	SLIDER, D	
540	3-343-358-12	RING, RETAINING	
541	4-931-752-11	SPACER	
542	4-931-765-01	SPRING, TENSION	
543	X-4920-333-1	LEVER (B) ASSY, FWD LIMITER	
544	* 4-936-052-01	LEVER (LEAF)	
545	4-931-764-01	SPRING	
546	3-701-437-01	WASHER	
547	3-322-566-01	BEARING, PULLEY	
550	X-4920-324-1	LEVER ASSY, AMS	
551	3-325-698-01	RING, RETAINING	
552	4-936-223-01	SPRING, COMPRESSION	
553	* 4-936-243-01	SPACER (FF)	
M601	1-541-630-11	MOTOR, DC	
PM601	1-454-459-21	SOLENOID, PLUNGER	

SECTION 7
ELECTRICAL PARTS LIST

CD CTRL

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxicide-film resistor
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When including parts by reference number, please include the board name.

- E2: AC120V ZONE
  E3: AC240V ZONE
  JE: Tourist

Ref.No.	Part No.	Description			Remark
	* A-3261-325-A	CD CTRL BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C803	1-126-096-11	ELECT	10uF	20% 35V	
C804	1-162-207-31	CERAMIC	22PF	5% 50V	
C805	1-162-207-31	CERAMIC	22PF	5% 50V	
C806	1-124-635-00	ELECT	220uF	20% 6.3V	
C807	1-136-165-00	FILM	0.1uF	5% 50V	
		< FILTER >			
CF801	1-567-818-21	VIBRATOR, CERAMIC			
		< CONNECTOR >			
CN101	* 1-568-452-11	PIN, CONNECTOR (PC BOARD) 3P			
		(TRANSLATION CN801)			
CN102	* 1-565-041-11	PIN, CONNECTOR (PC BOARD) 5P			
		(TRANSLATION CN802)			
CN103	* 1-566-973-11	PIN, CONNECTOR (PC BOARD) 8P			
		(TRANSLATION CN803)			
CN104	* 1-568-455-11	PIN, CONNECTOR (PC BOARD) 10P			
		(TRANSLATION CN804)			
CN106	* 1-568-452-11	PIN, CONNECTOR (PC BOARD) 3P			
		(TRANSLATION CN806)			
CN801	* 1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P			
CN802	* 1-565-042-11	HOUSING, CONNECTOR (PC BOARD) 5P			
CN803	* 1-566-970-11	HOUSING, CONNECTOR (PC BOARD) 8P			
CN804	* 1-568-451-11	HOUSING, CONNECTOR (PC BOARD) 10P			
CN806	* 1-568-449-11	HOUSING, CONNECTOR (PC BOARD) 3P			
CN807	* 1-563-257-11	SOCKET, CONNECTOR 5P			

Ref.No.	Part No.	Description			Remark
		< DIODE >			
D802	8-719-911-19	DIODE 1SS119			
D803	8-719-911-19	DIODE 1SS119			
D805	8-719-911-19	DIODE 1SS119			
D806	8-719-911-19	DIODE 1SS119			
		< IC >			
IC801	8-752-819-29	IC CXP5078-063Q			
IC804	8-759-970-47	IC PST529J			
		< COIL >			
L801	1-410-678-31	INDUCTOR	220uH		
L802	1-410-678-31	INDUCTOR	220uH		
		< LCD >			
LCD801	1-808-973-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< TRANSISTOR >			
Q801	8-729-920-68	TRANSISTOR 2SA933S-QR			
Q802	8-729-806-30	TRANSISTOR 2SC4048			
Q803	8-729-902-80	TRANSISTOR DTA114YSP			
		< RESISTOR >			
R801	1-249-418-11	CARBON	1.2K	5% 1/4W	
R802	1-249-418-11	CARBON	1.2K	5% 1/4W	
R803	1-249-418-11	CARBON	1.2K	5% 1/4W	
R804	1-249-418-11	CARBON	1.2K	5% 1/4W	
R805	1-249-418-11	CARBON	1.2K	5% 1/4W	
R806	1-249-418-11	CARBON	1.2K	5% 1/4W	
R807	1-249-420-11	CARBON	1.8K	5% 1/4W	
R808	1-249-420-11	CARBON	1.8K	5% 1/4W	
R809	1-249-420-11	CARBON	1.8K	5% 1/4W	
R810	1-249-420-11	CARBON	1.8K	5% 1/4W	

CD CTRL | CD MAIN

Ref. No.	Part No.	Description			Remark
R811	1-249-420-11	CARBON	1.8K	5%	1/4W
R812	1-249-420-11	CARBON	1.8K	5%	1/4W
R814	1-249-423-11	CARBON	3.3K	5%	1/4W
R815	1-249-423-11	CARBON	3.3K	5%	1/4W
R816	1-249-423-11	CARBON	3.3K	5%	1/4W
R817	1-249-423-11	CARBON	3.3K	5%	1/4W
R818	1-249-423-11	CARBON	3.3K	5%	1/4W
R820	1-249-428-11	CARBON	8.2K	5%	1/4W
R821	1-249-428-11	CARBON	8.2K	5%	1/4W
R822	1-249-428-11	CARBON	8.2K	5%	1/4W
R823	1-249-428-11	CARBON	8.2K	5%	1/4W
R824	1-249-428-11	CARBON	8.2K	5%	1/4W
R825	1-249-433-11	CARBON	22K	5%	1/4W
R826	1-247-883-00	CARBON	150K	5%	1/4W
R827	1-247-883-00	CARBON	150K	5%	1/4W
R828	1-247-883-00	CARBON	150K	5%	1/4W
R829	1-247-883-00	CARBON	150K	5%	1/4W
R830	1-247-883-00	CARBON	150K	5%	1/4W
R831	1-249-405-11	CARBON	100	5%	1/4W
R832	1-249-425-11	CARBON	4.7K	5%	1/4W
R833	1-249-425-11	CARBON	4.7K	5%	1/4W
R834	1-249-425-11	CARBON	4.7K	5%	1/4W
R835	1-249-425-11	CARBON	4.7K	5%	1/4W
R836	1-249-425-11	CARBON	4.7K	5%	1/4W
R837	1-249-425-11	CARBON	4.7K	5%	1/4W
R838	1-249-429-11	CARBON	10K	5%	1/4W
R839	1-249-441-11	CARBON	100K	5%	1/4W
R840	1-247-891-00	CARBON	330K	5%	1/4W
R841	1-249-417-11	CARBON	1K	5%	1/4W
R844	1-249-423-11	CARBON	3.3K	5%	1/4W
R845	1-249-417-11	CARBON	1K	5%	1/4W
R846	1-249-423-11	CARBON	3.3K	5%	1/4W

< SWITCH >

S803	1-572-630-11	SWITCH, KEY BOARD (STOP)
S804	1-572-630-11	SWITCH, KEY BOARD (PAUSE)
S805	1-572-630-11	SWITCH, KEY BOARD (PLAY)
S806	1-572-630-11	SWITCH, KEY BOARD (⏮/←)
S807	1-572-630-11	SWITCH, KEY BOARD (⏭/→)
S808	1-572-630-11	SWITCH, KEY BOARD (◀◀/INTRO SCAN)
S809	1-572-630-11	SWITCH, KEY BOARD (▶▶/PRG CHECK)
S810	1-572-630-11	SWITCH, KEY BOARD (+10/AM/PM)
S811	1-572-630-11	SWITCH, KEY BOARD (CLOCK)
S812	1-572-630-11	SWITCH, KEY BOARD (TIMER)
S813	1-572-630-11	SWITCH, KEY BOARD (SLEEP)
S814	1-572-630-11	SWITCH, KEY BOARD (STANDBY)
S815	1-572-630-11	SWITCH, KEY BOARD (DISPLAY)
S816	1-572-630-11	SWITCH, KEY BOARD (EDIT/PRG CLEAR)
S817	1-572-630-11	SWITCH, KEY BOARD (AUTO SPACE)
S818	1-572-630-11	SWITCH, KEY BOARD (REPEAT/1/ALL)
S819	1-572-630-11	SWITCH, KEY BOARD (PRG/SHUFF)
S820	1-572-630-11	SWITCH, KEY BOARD (1)
S821	1-572-630-11	SWITCH, KEY BOARD (2)
S822	1-572-630-11	SWITCH, KEY BOARD (3)
S823	1-572-630-11	SWITCH, KEY BOARD (4)
S824	1-572-630-11	SWITCH, KEY BOARD (5)
S825	1-572-630-11	SWITCH, KEY BOARD (6)
S826	1-572-630-11	SWITCH, KEY BOARD (7)
S827	1-572-630-11	SWITCH, KEY BOARD (8)
S828	1-572-630-11	SWITCH, KEY BOARD (9)
S829	1-572-630-11	SWITCH, KEY BOARD (0)

< CRYSTAL >

X801	1-567-098-00	CRYSTAL (32.768KHz)

****

* A-3222-018-A CD MAIN BOARD, COMPLETE
****

* 4-930-246-11 PAPER (N), SHIELD

< CAPACITOR >

C701	1-130-475-00	MYLAR	0.0022uF	5%	50V
C702	1-124-242-00	ELECT	33uF	20%	25V
C703	1-162-294-31	CERAMIC	0.001uF	10%	50V
C704	1-124-584-00	ELECT	100uF	20%	10V
C705	1-126-176-11	ELECT	220uF	20%	10V
C706	1-130-489-00	MYLAR	0.033uF	5%	50V
C707	1-131-374-00	TANTALUM	33uF	10%	16V
C708	1-130-489-00	MYLAR	0.033uF	5%	50V
C709	1-130-483-00	MYLAR	0.01uF	5%	50V
C710	1-124-242-00	ELECT	33uF	20%	25V
C711	1-162-201-31	CERAMIC	12PF	5%	50V
C712	1-162-201-31	CERAMIC	12PF	5%	50V
C713	1-124-472-11	ELECT	470uF	20%	10V
C714	1-161-379-00	CERAMIC	0.01uF	20%	25V
C715	1-136-173-00	FILM	0.47uF	5%	50V
C716	1-130-483-00	MYLAR	0.01uF	5%	50V
C717	1-162-294-31	CERAMIC	0.001uF	10%	50V
C718	1-124-902-00	ELECT	0.47uF	20%	50V
C719	1-162-851-11	CERAMIC	0.1uF		16V
C720	1-130-489-00	MYLAR	0.033uF	5%	50V
C721	1-124-034-51	ELECT	33uF	20%	16V
C722	1-130-475-00	MYLAR	0.0022uF	5%	50V
C723	1-161-021-11	CERAMIC	0.047uF	10%	25V
C724	1-162-294-31	CERAMIC	0.001uF	10%	50V
C725	1-136-165-00	FILM	0.1uF	5%	50V

Ref. No.	Part No.	Description			Remark
C726	1-136-165-00	FILM	0.1uF	5%	50V
C727	1-124-034-51	ELECT	33uF	20%	16V
C728	1-131-377-00	TANTALUM	10uF	10%	10V
C729	1-136-165-00	FILM	0.1uF	5%	50V
C730	1-126-157-11	ELECT	10uF	20%	16V
C731	1-161-061-11	CERAMIC	0.068uF	10%	50V
C732	1-162-215-31	CERAMIC	47PF	5%	50V
C733	1-124-034-51	ELECT	33uF	20%	16V
C734	1-130-481-00	MYLAR	0.0068uF	5%	50V
C735	1-162-284-31	CERAMIC	150PF	10%	50V
C736	1-161-379-00	CERAMIC	0.01uF	20%	25V
C737	1-161-379-00	CERAMIC	0.01uF	20%	25V
C738	1-161-379-00	CERAMIC	0.01uF	20%	25V
C739	1-161-379-00	CERAMIC	0.01uF	20%	25V
C740	1-124-034-51	ELECT	33uF	20%	16V
C741	1-162-294-31	CERAMIC	0.001uF	10%	50V
C742	1-162-851-11	CERAMIC	0.1uF		16V
C743	1-130-481-00	MYLAR	0.0068uF	5%	50V
C744	1-124-791-11	ELECT	1.0uF	20%	100V
C745	1-130-475-00	MYLAR	0.0022uF	5%	50V
C746	1-130-469-00	MYLAR	680PF	5%	50V
C747	1-102-960-00	CERAMIC	24PF	5%	50V
C748	1-126-176-11	ELECT	220uF	20%	10V
C749	1-124-791-11	ELECT	1.0uF	20%	100V
C750	1-130-488-00	MYLAR	0.027uF	5%	50V
C751	1-124-791-11	ELECT	1.0uF	20%	100V
C752	1-124-604-00	ELECT	330uF	20%	10V
C753	1-126-176-11	ELECT	220uF	20%	10V
C754	1-124-791-11	ELECT	1.0uF	20%	100V
C755	1-130-475-00	MYLAR	0.0022uF	5%	50V
C756	1-130-469-00	MYLAR	680PF	5%	50V
C757	1-102-960-00	CERAMIC	24PF	5%	50V
C758	1-124-791-11	ELECT	1.0uF	20%	100V
C759	1-124-791-11	ELECT	1.0uF	20%	100V
C760	1-130-488-00	MYLAR	0.027uF	5%	50V
C761	1-136-173-00	FILM	0.47uF	5%	50V
C765	1-162-294-31	CERAMIC	0.001uF	10%	50V
C767	1-162-294-31	CERAMIC	0.001uF	10%	50V
C768	1-162-851-11	CERAMIC	0.1uF		16V
C770	1-124-360-00	ELECT	1000uF	20%	16V
C771	1-124-791-11	ELECT	1.0uF	20%	100V
C780	1-124-034-51	ELECT	33uF	20%	16V
C781	1-124-034-51	ELECT	33uF	20%	16V
C784	1-126-176-11	ELECT	220uF	20%	10V
C790	1-161-379-00	CERAMIC	0.01uF	20%	25V
C791	1-126-163-11	ELECT	4.7uF	20%	50V
C792	1-126-160-11	ELECT	1uF	20%	50V
C794	1-124-791-11	ELECT	1.0uF	20%	100V
C851	1-162-292-31	CERAMIC	680PF	10%	50V
C852	1-162-215-31	CERAMIC	47PF	5%	50V
C853	1-162-215-31	CERAMIC	47PF	5%	50V

< CONNECTOR >

CN701	* 1-564-710-11	PIN, CONNECTOR (SMALL TYPE)		8P
CN702	* 1-564-710-11	PIN, CONNECTOR (SMALL TYPE)		8P
CN703	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE)		6P
CN704	* 1-564-712-11	PIN, CONNECTOR (SMALL TYPE)		10P
CN705	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE)		3P
CN708	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE)		2P
CN709	* 1-564-707-11	PIN, CONNECTOR (SMALL TYPE)		5P
CN710	* 1-564-710-11	PIN, CONNECTOR (SMALL TYPE)		8P
CN711	* 1-564-712-11	PIN, CONNECTOR (SMALL TYPE)		10P

< DIODE >

D701	8-719-911-19	DIODE 1SS119
D702	8-719-911-19	DIODE 1SS119
D704	8-719-911-19	DIODE 1SS119
D706	8-719-911-19	DIODE 1SS119
D707	8-719-911-19	DIODE 1SS119
D804	8-719-911-19	DIODE 1SS119
D805	8-719-911-19	DIODE 1SS119

< IC >

IC701	8-752-033-14	IC CXA1081Q
IC702	8-752-032-32	IC CXA1182Q-Z
IC703	8-752-328-46	IC CXD1130Q
IC704	8-752-323-64	IC CXK5816M-12L
IC706	8-759-710-98	IC NJM2100D
IC707	8-759-148-30	IC uPD6376GS
IC708	8-759-501-65	IC BA6294
IC709	8-759-501-65	IC BA6294
IC802	8-759-945-58	IC RC4558P

< COIL >

L701	1-410-316-11	INDUCTOR	1uH
L702	1-410-322-11	INDUCTOR	3.3uH
L703	1-410-322-11	INDUCTOR	3.3uH

< TRANSISTOR >

Q701	8-729-801-84	TRANSISTOR 2SB1013-34
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q704	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q705	8-729-900-63	TRANSISTOR DTA124ES
Q706	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q711	8-729-900-36	TRANSISTOR DTC124ES
Q712	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q713	8-729-119-78	TRANSISTOR 2SC2785-HFE

CD MAIN

Ref. No.	Part No.	Description			Remark
Q714	8-729-900-63	TRANSISTOR DTA124ES			
Q791	8-729-900-36	TRANSISTOR DTC124ES			
Q792	8-729-900-36	TRANSISTOR DTC124ES			
Q793	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q794	8-729-900-74	TRANSISTOR DTC143TS			
		< RESISTOR >			
R701	1-249-433-11	CARBON	22K	5% 1/4W	
R702	1-249-417-11	CARBON	1K	5% 1/4W	
R703	1-249-433-11	CARBON	22K	5% 1/4W	
R704	1-249-397-11	CARBON	22	5% 1/4W	
R705	1-247-806-11	CARBON	91	5% 1/4W	
R711	1-249-428-11	CARBON	8.2K	5% 1/4W	
R712	1-247-856-00	CARBON	11K	5% 1/4W	
R713	1-249-441-11	CARBON	100K	5% 1/4W	
R714	1-249-425-11	CARBON	4.7K	5% 1/4W	
R715	1-249-441-11	CARBON	100K	5% 1/4W	
R716	1-247-886-11	CARBON	200K	5% 1/4W	
R717	1-215-431-00	METAL	2.7K	1% 1/6W	
R718	1-247-903-00	CARBON	1M	5% 1/4W	
R719	1-249-417-11	CARBON	1K	5% 1/4W	
R720	1-247-883-00	CARBON	150K	5% 1/4W	
R721	1-249-437-11	CARBON	47K	5% 1/4W	
R722	1-249-429-11	CARBON	10K	5% 1/4W	
R723	1-249-441-11	CARBON	100K	5% 1/4W	
R724	1-249-438-11	CARBON	56K	5% 1/4W	
R725	1-247-885-00	CARBON	180K	5% 1/4W	
R726	1-249-437-11	CARBON	47K	5% 1/4W	
R727	1-249-441-11	CARBON	100K	5% 1/4W	
R728	1-247-854-11	CARBON	9.1K	5% 1/4W	
R729	1-247-894-11	CARBON	430K	5% 1/4W	
R730	1-249-441-11	CARBON	100K	5% 1/4W	
R731	1-215-457-00	METAL	33K	1% 1/6W	
R732	1-215-457-00	METAL	33K	1% 1/6W	
R733	1-247-895-00	CARBON	470K	5% 1/4W	
R734	1-249-417-11	CARBON	1K	5% 1/4W	
R735	1-249-417-11	CARBON	1K	5% 1/4W	
R736	1-249-429-11	CARBON	10K	5% 1/4W	
R743	1-215-438-00	METAL	5.1K	1% 1/6W	
R744	1-215-456-00	METAL	30K	1% 1/6W	
R745	1-215-454-00	METAL	24K	1% 1/6W	
R746	1-215-471-00	METAL	120K	1% 1/6W	
R747	1-249-431-11	CARBON	15K	5% 1/4W	
R748	1-249-422-11	CARBON	2.7K	5% 1/4W	
R749	1-247-834-11	CARBON	1.3K	5% 1/4W	
R750	1-249-414-11	CARBON	560	5% 1/4W	
R751	1-247-903-00	CARBON	1M	5% 1/4W	
R752	1-249-430-11	CARBON	12K	5% 1/4W	
R753	1-215-438-00	METAL	5.1K	1% 1/6W	
R754	1-215-456-00	METAL	30K	1% 1/6W	
R755	1-215-454-00	METAL	24K	1% 1/6W	
R756	1-215-471-00	METAL	120K	1% 1/6W	
R757	1-247-887-00	CARBON	220K	5% 1/4W	
R758	1-249-422-11	CARBON	2.7K	5% 1/4W	
R759	1-247-834-11	CARBON	1.3K	5% 1/4W	
R760	1-249-414-11	CARBON	560	5% 1/4W	
R761	1-247-903-00	CARBON	1M	5% 1/4W	
R762	1-249-422-11	CARBON	2.7K	5% 1/4W	
R763	1-249-422-11	CARBON	2.7K	5% 1/4W	
R764	1-247-887-00	CARBON	220K	5% 1/4W	
R765	1-249-395-11	CARBON	15	5% 1/4W	
R766	1-249-395-11	CARBON	15	5% 1/4W	
R767	1-249-425-11	CARBON	4.7K	5% 1/4W	
R768	1-249-405-11	CARBON	100	5% 1/4W	
R770	1-215-453-00	METAL	22K	1% 1/6W	
R771	1-215-453-00	METAL	22K	1% 1/6W	
R772	1-215-453-00	METAL	22K	1% 1/6W	
R773	1-215-453-00	METAL	22K	1% 1/6W	
R774	1-215-429-00	METAL	2.2K	1% 1/6W	
R775	1-215-457-00	METAL	33K	1% 1/6W	
R776	1-215-457-00	METAL	33K	1% 1/6W	
R777	1-215-457-00	METAL	33K	1% 1/6W	
R778	1-215-433-00	METAL	3.3K	1% 1/6W	
R779	1-247-868-11	CARBON	36K	5% 1/4W	
R780	1-249-435-11	CARBON	33K	5% 1/4W	
R781	1-247-876-11	CARBON	75K	5% 1/4W	
R782	1-249-435-11	CARBON	33K	5% 1/4W	
R783	1-249-417-11	CARBON	1K	5% 1/4W	
R784	1-249-429-11	CARBON	10K	5% 1/4W	
R785	1-249-410-11	CARBON	270	5% 1/4W	
R787 ⚠•	1-212-861-11	FUSIBLE	15	5% 1/4W	F
R789	1-249-433-11	CARBON	22K	5% 1/4W	
R791	1-247-838-00	CARBON	2K	5% 1/4W	
R792	1-249-437-11	CARBON	47K	5% 1/4W	
R793	1-249-429-11	CARBON	10K	5% 1/4W	
R799	1-249-441-11	CARBON	100K	5% 1/4W	
R851	1-215-457-00	METAL	33K	1% 1/6W	
R852	1-247-893-11	CARBON	390K	5% 1/4W	
R853	1-249-441-11	CARBON	100K	5% 1/4W	
R854	1-247-895-00	CARBON	470K	5% 1/4W	
R855	1-249-441-11	CARBON	100K	5% 1/4W	
		< VARIABLE RESISTOR >			
RV701	1-230-497-11	RES, ADJ, CARBON 20K			
RV702	1-230-498-11	RES, ADJ, CARBON 50K			
RV703	1-228-991-00	RES, ADJ, METAL 2.2K			
RV704	1-230-497-11	RES, ADJ, CARBON 20K			
RV705	1-230-497-11	RES, ADJ, CARBON 20K			

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

CD MAIN | CD MOTOR | DIRECTION LED | ECHO

Ref.No.	Part No.	Description			Remark
		< CRYSTAL >			
XF701	1-567-908-11	VIBRATOR, CRYSTAL (16.9344MHz)			
**********					
	* 1-634-633-11	CD MOTOR BOARD			
		**********			
		< CONNECTOR >			
CN706	* 1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P			
**********					
	* 1-634-692-11	DIRECTION LED BOARD			
		**********			
		< CONNECTOR >			
CN313	* 1-564-720-61	PIN, CONNECTOR (SMALL TYPE) 4P			
CN808	* 1-506-743-11	PIN, CONNECTOR 5P			
		< DIODE >			
D314	8-719-921-01	LED EBR5534S			
D315	8-719-921-01	LED EBR5534S			
**********					
	* A-3261-331-A	ECHO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C651	1-124-443-00	ELECT	100uF	20% 10V	
C652	1-161-772-11	CERAMIC	0.1uF	10% 25V	
C653	1-124-126-00	ELECT	47uF	20% 10V	
C654	1-161-379-00	CERAMIC	0.01uF	20% 25V	
C655	1-162-209-31	CERAMIC	27PF	5% 50V	
C656	1-162-209-31	CERAMIC	27PF	5% 50V	
C657	1-161-772-11	CERAMIC	0.1uF	10% 25V	
C658	1-124-443-00	ELECT	100uF	20% 10V	
C659	1-162-291-31	CERAMIC	560PF	10% 50V	
C660	1-124-499-11	ELECT, NONPOLAR	1uF	20% 50V	
C661	1-102-126-00	CERAMIC	0.0056uF	10% 50V	
C662	1-102-129-00	CERAMIC	10000PF	10% 50V	
C663	1-102-115-00	CERAMIC	560PF	10% 50V	
C664	1-130-491-00	FILM	0.047uF	5% 50V	
C665	1-102-129-00	CERAMIC	10000PF	10% 50V	
C666	1-102-126-00	CERAMIC	0.0056uF	10% 50V	
C667	1-161-021-11	CERAMIC	0.047uF	10% 25V	
C668	1-161-021-11	CERAMIC	0.047uF	10% 25V	
C669	1-136-171-00	FILM	0.33uF	5% 50V	
C670	1-102-129-00	CERAMIC	10000PF	10% 50V	
C671	1-136-171-00	FILM	0.33uF	5% 50V	
C672	1-102-129-00	CERAMIC	10000PF	10% 50V	
C673	1-161-772-11	CERAMIC	0.1uF	10% 25V	
C674	1-123-875-11	ELECT	10uF	20% 50V	
		< CONNECTOR >			
CN386	* 1-564-708-81	PIN, CONNECTOR (SMALL TYPE) 6P			
CN387	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
		< DIODE >			
D601	8-719-911-19	DIODE 1SS119			
D602	8-719-911-19	DIODE 1SS119			
		< IC >			
IC651	8-759-938-15	IC BA178M05			
IC652	8-759-635-81	IC M50197P			
		< COIL >			
L601	1-408-111-00	INDUCTOR	3.3uH		
		< TRANSISTOR >			
Q651	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q652	8-729-119-78	TRANSISTOR 2SC2785-HFE			
		< RESISTOR >			
R651	1-249-429-11	CARBON	10K	5% 1/4W	
R652	1-247-903-00	CARBON	1M	5% 1/4W	
R653	1-249-431-11	CARBON	15K	5% 1/4W	
R654	1-249-429-11	CARBON	10K	5% 1/4W	
R655	1-249-431-11	CARBON	15K	5% 1/4W	
R656	1-247-842-11	CARBON	3K	5% 1/4W	
R657	1-247-842-11	CARBON	3K	5% 1/4W	
R658	1-249-422-11	CARBON	2.7K	5% 1/4W	
R659	1-249-431-11	CARBON	15K	5% 1/4W	
R660	1-249-431-11	CARBON	15K	5% 1/4W	
R661	1-247-852-11	CARBON	7.5K	5% 1/4W	
R662	1-247-876-11	CARBON	75K	5% 1/4W	
R663	1-247-852-11	CARBON	7.5K	5% 1/4W	
R664	1-247-876-11	CARBON	75K	5% 1/4W	
R665	1-249-429-11	CARBON	10K	5% 1/4W	
R666	1-249-429-11	CARBON	10K	5% 1/4W	
		< CERAMIC >			
X601	1-567-192-11	RESONATOR, CERAMIC (4.00MHz)			
**********					

FUNCTION

Ref. No.	Part No.	Description			Remark
*	A-3261-328-A	FUNCTION BOARD, COMPLETE			
		**********			
*	3-363-710-01	CHASSIS			
	3-684-465-01	NUT, HEXAGON			
	4-936-053-01	SHAFT, RELAY			
	4-936-055-01	BUTTON (SPACE)			
	4-936-055-11	BUTTON (SPACE)			
	4-936-056-01	KNOB (SLIDE)			
	4-936-057-01	KNOB (ROTARY)			
		< CAPACITOR >			
C151	1-162-282-31	CERAMIC	100PF	10% 50V	
C165	1-124-927-11	ELECT	4.7uF	20% 100V	
C166	1-130-479-00	MYLAR	0.0047uF	5% 50V	
C167	1-130-488-00	MYLAR	0.027uF	5% 50V	
C168	1-130-488-00	MYLAR	0.027uF	5% 50V	
C169	1-130-495-00	MYLAR	0.1uF	5% 50V	
C170	1-124-791-11	ELECT	1.0uF	20% 100V	
C171	1-136-165-00	FILM	0.1uF	5% 50V	
C172	1-162-282-31	CERAMIC	100PF	10% 50V	
C179	1-162-217-31	CERAMIC	56PF	5% 50V	
C180	1-124-902-00	ELECT	0.47uF	20% 50V	
C251	1-162-282-31	CERAMIC	100PF	10% 50V	
C265	1-124-927-11	ELECT	4.7uF	20% 100V	
C266	1-130-479-00	MYLAR	0.0047uF	5% 50V	
C267	1-130-488-00	MYLAR	0.027uF	5% 50V	
C268	1-130-488-00	MYLAR	0.027uF	5% 50V	
C269	1-130-495-00	MYLAR	0.1uF	5% 50V	
C270	1-124-791-11	ELECT	1.0uF	20% 100V	
C271	1-136-165-00	FILM	0.1uF	5% 50V	
C272	1-162-282-31	CERAMIC	100PF	10% 50V	
C279	1-162-217-31	CERAMIC	56PF	5% 50V	
C280	1-124-902-00	ELECT	0.47uF	20% 50V	
C372	1-126-176-11	ELECT	220uF	20% 10V	
C373	1-130-467-00	MYLAR	470PF	5% 50V	
C374	1-130-471-00	MYLAR	0.001uF	5% 50V	
C376	1-124-443-00	ELECT	100uF	20% 10V	
C601	1-124-791-11	ELECT	1.0uF	20% 100V	
C602	1-124-927-11	ELECT	4.7uF	20% 100V	
C603	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C604	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C605	1-162-282-31	CERAMIC	100PF	10% 50V	
C606	1-162-282-31	CERAMIC	100PF	10% 50V	
C607	1-124-791-11	ELECT	1.0uF	20% 100V	
C608	1-124-791-11	ELECT	1.0uF	20% 100V	
C609	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C610	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C611	1-123-875-11	ELECT	10uF	20% 50V	
C612	1-123-875-11	ELECT	10uF	20% 50V	
C613	1-126-176-11	ELECT	220uF	20% 10V	
C614	1-124-791-11	ELECT	1.0uF	20% 100V	
C615	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C616	1-124-791-11	ELECT	1.0uF	20% 100V	
C617	1-124-791-11	ELECT	1.0uF	20% 100V	
C618	1-124-791-11	ELECT	1.0uF	20% 100V	
C619	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C620	1-124-791-11	ELECT	1.0uF	20% 100V	
C621	1-126-176-11	ELECT	220uF	20% 10V	
C622	1-124-791-11	ELECT	1.0uF	20% 100V	
C623	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C624	1-126-176-11	ELECT	220uF	20% 10V	
C625	1-124-791-11	ELECT	1.0uF	20% 100V	
		< CONNECTOR >			
CN371	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
CN372	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CN373	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN374	* 1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CN375	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN376	* 1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P			
CN377	* 1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
CN378	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN379	* 1-564-708-81	PIN, CONNECTOR (SMALL TYPE) 6P			
		< DIODE >			
D370	8-719-109-68	DIODE RD3.6ESB1			
		< FILTER >			
FL151	1-236-081-11	FILTER, LOW PASS			
FL251	1-236-081-11	FILTER, LOW PASS			
		< IC >			
IC371	8-759-989-89	IC BA4558N			
IC601	8-759-932-80	IC BA328			
		< COIL >			
L372	1-410-971-11	INDUCTOR	10uH		
		< TRANSISTOR >			
Q371	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q651	8-729-205-83	TRANSISTOR 2SC2458L-GR			
Q652	8-729-205-83	TRANSISTOR 2SC2458L-GR			
Q653	8-729-205-83	TRANSISTOR 2SC2458L-GR			
Q654	8-729-205-83	TRANSISTOR 2SC2458L-GR			
Q655	8-729-205-83	TRANSISTOR 2SC2458L-GR			
Q657	8-729-205-83	TRANSISTOR 2SC2458L-GR			

FUNCTION | POWER AMP

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R151	1-249-419-11	CARBON	1.5K	5%	1/4W
R152	1-249-431-11	CARBON	15K	5%	1/4W
R153	1-249-430-11	CARBON	12K	5%	1/4W
R154	1-249-432-11	CARBON	18K	5%	1/4W
R155	1-249-439-11	CARBON	68K	5%	1/4W
R156	1-249-428-11	CARBON	8.2K	5%	1/4W
R157	1-249-426-11	CARBON	5.6K	5%	1/4W
R158	1-249-429-11	CARBON	10K	5%	1/4W
R159	1-247-864-11	CARBON	24K	5%	1/4W
R166	1-249-427-11	CARBON	6.8K	5%	1/4W
R167	1-249-429-11	CARBON	10K	5%	1/4W
R168	1-249-422-11	CARBON	2.7K	5%	1/4W
R169	1-249-421-11	CARBON	2.2K	5%	1/4W
R170	1-249-421-11	CARBON	2.2K	5%	1/4W
R171	1-249-441-11	CARBON	100K	5%	1/4W
R173	1-249-433-11	CARBON	22K	5%	1/4W
R174	1-247-887-00	CARBON	220K	5%	1/4W
R175	1-249-417-11	CARBON	1K	5%	1/4W
R177	1-249-433-11	CARBON	22K	5%	1/4W
R178	1-249-437-11	CARBON	47K	5%	1/4W
R251	1-249-419-11	CARBON	1.5K	5%	1/4W
R252	1-249-431-11	CARBON	15K	5%	1/4W
R253	1-249-430-11	CARBON	12K	5%	1/4W
R254	1-249-432-11	CARBON	18K	5%	1/4W
R255	1-249-439-11	CARBON	68K	5%	1/4W
R256	1-249-428-11	CARBON	8.2K	5%	1/4W
R257	1-249-426-11	CARBON	5.6K	5%	1/4W
R258	1-249-429-11	CARBON	10K	5%	1/4W
R259	1-247-864-11	CARBON	24K	5%	1/4W
R266	1-249-427-11	CARBON	6.8K	5%	1/4W
R267	1-249-429-11	CARBON	10K	5%	1/4W
R268	1-249-422-11	CARBON	2.7K	5%	1/4W
R269	1-249-421-11	CARBON	2.2K	5%	1/4W
R270	1-249-421-11	CARBON	2.2K	5%	1/4W
R271	1-249-441-11	CARBON	100K	5%	1/4W
R273	1-249-433-11	CARBON	22K	5%	1/4W
R274	1-247-887-00	CARBON	220K	5%	1/4W
R275	1-249-417-11	CARBON	1K	5%	1/4W
R277	1-249-433-11	CARBON	22K	5%	1/4W
R278	1-249-437-11	CARBON	47K	5%	1/4W
R371	1-249-419-11	CARBON	1.5K	5%	1/4W
R376	1-249-421-11	CARBON	2.2K	5%	1/4W
R377	1-249-422-11	CARBON	2.7K	5%	1/4W
R378	1-249-421-11	CARBON	2.2K	5%	1/4W
R379	1-247-820-11	CARBON	360	5%	1/4W
R380	1-249-418-11	CARBON	1.2K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R601	1-247-848-11	CARBON	5.1K	5%	1/4W
R602	1-247-848-11	CARBON	5.1K	5%	1/4W
R603	1-249-419-11	CARBON	1.5K	5%	1/4W
R604	1-249-419-11	CARBON	1.5K	5%	1/4W
R605	1-249-417-11	CARBON	1K	5%	1/4W
R606	1-249-417-11	CARBON	1K	5%	1/4W
R607	1-249-441-11	CARBON	100K	5%	1/4W
R608	1-249-441-11	CARBON	100K	5%	1/4W
R609	1-249-402-11	CARBON	56	5%	1/4W
R610	1-249-418-11	CARBON	1.2K	5%	1/4W
R611	1-247-891-00	CARBON	330K	5%	1/4W
R612	1-249-421-11	CARBON	2.2K	5%	1/4W
R613	1-249-429-11	CARBON	10K	5%	1/4W
R614	1-249-429-11	CARBON	10K	5%	1/4W
R615	1-247-891-00	CARBON	330K	5%	1/4W
R616	1-249-426-11	CARBON	5.6K	5%	1/4W
R617	1-249-413-11	CARBON	470	5%	1/4W
R618	1-249-421-11	CARBON	2.2K	5%	1/4W
R619	1-249-421-11	CARBON	2.2K	5%	1/4W
R620	1-247-899-00	CARBON	680K	5%	1/4W
R621	1-249-426-11	CARBON	5.6K	5%	1/4W
R622	1-249-413-11	CARBON	470	5%	1/4W
R623	1-249-419-11	CARBON	1.5K	5%	1/4W
R624	1-249-415-11	CARBON	680	5%	1/4W
R625	1-249-433-11	CARBON	22K	5%	1/4W
		< VARIABLE RESISTOR >			
RV351	1-238-944-11	RES, VAR, CARBON 20K/20K (TONE)			
RV352	1-238-944-11	RES, VAR, CARBON 20K/20K (MEGA BASS)			
RV601	1-241-283-11	RES, VAR, CARBON 20K (DIGITAL ECHO)			
RV602	1-241-283-11	RES, VAR, CARBON 20K (MIC/INSTRUMENT VOLUME)			
		< SWITCH >			
S371	1-571-945-11	SWITCH, SLIDE (FUNCTION)			
S372	1-571-307-11	SWITCH, SLIDE (ISS)			
S373	1-572-544-11	SWITCH, PUSH (1 KEY) (KARAOKE MODE)			
S374	1-572-621-11	SWITCH, PUSH (1 KEY) (MIC 2/INSTRUMENT)			

****

* A-3261-330-A POWER AMPLIFIER BOARD, COMPLETE
****

4-931-316-01 KNOB (POWER)
4-936-051-01 KNOB (VOL)
7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3

POWER AMP

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C181	1-161-375-00	CERAMIC	0.0022uF	20% 50V	
C182	1-136-165-00	FILM	0.1uF	5% 50V	
C183	1-124-925-11	ELECT	2.2uF	20% 100V	
C184	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C185	1-126-101-11	ELECT	100uF	20% 16V	
C186	1-130-491-00	MYLAR	0.047uF	5% 50V	
C187	1-126-103-11	ELECT	470uF	20% 16V	
C281	1-161-375-00	CERAMIC	0.0022uF	20% 50V	
C282	1-136-165-00	FILM	0.1uF	5% 50V	
C283	1-124-925-11	ELECT	2.2uF	20% 100V	
C284	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C285	1-126-101-11	ELECT	100uF	20% 16V	
C286	1-130-491-00	MYLAR	0.047uF	5% 50V	
C287	1-126-103-11	ELECT	470uF	20% 16V	
C381	1-123-875-11	ELECT	10uF	20% 50V	
C382	1-130-491-00	MYLAR	0.047uF	5% 50V	
C383	1-136-171-00	FILM	0.33uF	5% 50V	
C384	1-161-329-00	CERAMIC	0.0068uF	30% 16V	
C385	1-123-875-11	ELECT	10uF	20% 50V	
C386	1-126-176-11	ELECT	220uF	20% 10V	
C387	1-124-477-11	ELECT	47uF	20% 25V	
C388	1-126-176-11	ELECT	220uF	20% 10V	
C389	1-124-927-11	ELECT	4.7uF	20% 100V	
C390	1-124-443-00	ELECT	100uF	20% 10V	
C391	1-130-495-00	MYLAR	0.1uF	5% 50V	
C392	1-126-101-11	ELECT	100uF	20% 16V	
C393	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C394	1-130-491-00	MYLAR	0.047uF	5% 50V	
C395	1-130-491-00	MYLAR	0.047uF	5% 50V	
C396	1-162-294-31	CERAMIC	0.001uF	10% 50V	
C397	1-124-480-11	ELECT	470uF	20% 25V	
C398	1-124-120-11	ELECT	220uF	20% 25V	
C399	1-126-233-11	ELECT	22uF	20% 50V	
		< CONNECTOR >			
CN381	* 1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CN382	* 1-564-508-11	PLUG, CONNECTOR 5P			
CN383	* 1-564-505-11	PLUG, CONNECTOR 2P			
CN384	* 1-564-706-61	PIN, CONNECTOR (SMALL TYPE) 4P			
CN385	* 1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
		< DIODE >			
D371	8-719-911-19	DIODE 1SS119			
D372	8-719-911-19	DIODE 1SS119			
D373	8-719-911-19	DIODE 1SS119			

Ref. No.	Part No.	Description			Remark
		< IC >			
IC380	8-759-821-92	IC LA4630N			
		< JACK >			
J901	1-563-649-11	JACK (PHONES)			
		< TRANSISTOR >			
Q381	8-729-205-83	TRANSISTOR 2SC2458L-GR			
Q382	8-729-102-14	TRANSISTOR 2SD1020-F			
Q383	8-729-925-16	TRANSISTOR 2SC1740SLN-RS			
Q384	8-729-902-80	TRANSISTOR DTA114YS			
Q385	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q386	8-729-900-36	TRANSISTOR DTC124ES			
		< RESISTOR >			
R180	1-249-423-11	CARBON	3.3K	5% 1/4W	
R181	1-249-426-11	CARBON	5.6K	5% 1/4W	
R182	1-249-417-11	CARBON	1K	5% 1/4W	
R183	⚠ 1-249-385-11	CARBON	2.2	5% 1/6W	
R184	1-247-887-00	CARBON	220K	5% 1/4W	
R185	1-249-407-11	CARBON	150	5% 1/4W	
R186	1-249-417-11	CARBON	1K	5% 1/4W	
R280	1-249-423-11	CARBON	3.3K	5% 1/4W	
R281	1-249-426-11	CARBON	5.6K	5% 1/4W	
R282	1-249-417-11	CARBON	1K	5% 1/4W	
R283	⚠ 1-249-385-11	CARBON	2.2	5% 1/6W	
R284	1-247-887-00	CARBON	220K	5% 1/4W	
R285	1-249-407-11	CARBON	150	5% 1/4W	
R286	1-249-417-11	CARBON	1K	5% 1/4W	
R381	1-249-421-11	CARBON	2.2K	5% 1/4W	
R382	1-249-431-11	CARBON	15K	5% 1/4W	
R383	1-249-431-11	CARBON	15K	5% 1/4W	
R384	1-249-431-11	CARBON	15K	5% 1/4W	
R385	1-247-895-00	CARBON	470K	5% 1/4W	
R386	1-249-428-11	CARBON	8.2K	5% 1/4W	
R387	1-249-425-11	CARBON	4.7K	5% 1/4W	
R388	1-249-441-11	CARBON	100K	5% 1/4W	
R389	1-249-411-11	CARBON	330	5% 1/4W	
R390	1-249-411-11	CARBON	330	5% 1/4W	
R391	1-249-411-11	CARBON	330	5% 1/4W	
R392	1-249-417-11	CARBON	1K	5% 1/4W	
R393	1-249-417-11	CARBON	1K	5% 1/4W	
R394	⚠ 1-249-385-11	CARBON	2.2	5% 1/6W	
R395	⚠ 1-249-385-11	CARBON	2.2	5% 1/6W	
R397	1-249-429-11	CARBON	10K	5% 1/4W	
R398	1-249-431-11	CARBON	15K	5% 1/4W	
R399	1-249-411-11	CARBON	330	5% 1/4W	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

POWER AMP / POWER SUPPLY

Ref. No.	Part No.	Description			Remark
		< VARIABLE RESISTOR >			
RV353	1-241-284-11	RES, VAR, CARBON 50K/50K (VOLUME)			
		< SWITCH >			
S951	1-570-913-11	SWITCH, PUSH (POWER)			
**********					
	A-3261-416-A	POWER SUPPLY BOARD, COMPLETE			
		**********			
*	1-636-984-11	VOLTAGE SELECTION BOARD			
*	3-350-683-01	CUSHION (LED), RUBBER			
	3-362-039-01	INSULATOR (T)			
	3-701-947-18	LABEL (T5A), FUSE			
*	4-880-403-11	HEAT SINK			
	7-682-548-04	SCREW +P 3X8			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3			
	9-911-841-XX	CUSHION			
		< CAPACITOR >			
C901	1-124-771-00	ELECT	6800uF	20%	25V
C902	1-164-097-11	CERAMIC	0.022uF		50V
C903	1-164-097-11	CERAMIC	0.022uF		50V
C904	1-164-097-11	CERAMIC	0.022uF		50V
C905	1-164-097-11	CERAMIC	0.022uF		50V
C906	1-161-772-11	CERAMIC	0.1uF	10%	25V
C950	1-123-875-11	ELECT	10uF	20%	50V
C951	1-164-097-11	CERAMIC	0.022uF		50V
C952	1-164-097-11	CERAMIC	0.022uF		50V
C953	1-126-103-11	ELECT	470uF	20%	16V
C954	1-164-097-11	CERAMIC	0.022uF		50V
C955	1-124-477-11	ELECT	47uF	20%	25V
C956	1-123-875-11	ELECT	10uF	20%	50V
C957	1-164-097-11	CERAMIC	0.022uF		50V
C958	1-124-477-11	ELECT	47uF	20%	25V
C959	1-164-097-11	CERAMIC	0.022uF		50V
C962	1-124-473-11	ELECT	1000uF	20%	10V
C963	1-164-097-11	CERAMIC	0.022uF		50V
C965	1-136-169-00	FILM	0.22uF	5%	50V
R966	1-164-097-11	CERAMIC	0.022uF		50V
C967	1-124-927-11	ELECT	4.7uF	20%	100V
C971	1-126-176-11	ELECT	220uF	20%	10V
C972	1-124-472-11	ELECT	470uF	20%	10V
C973	1-162-282-31	CERAMIC	100PF	10%	50V
C974	1-161-379-00	CERAMIC	0.01uF	20%	25V
C975	1-161-379-00	CERAMIC	0.01uF	20%	25V
C976	1-131-374-00	TANTALUM	33uF	10%	16V

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN951	* 1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P	
CN952	* 1-564-508-11	PLUG, CONNECTOR 5P	
CN953	* 1-564-505-11	PLUG, CONNECTOR 2P	
CN954	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
CN955	* 1-564-712-11	PIN, CONNECTOR (SMALL TYPE) 10P	
CN956	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P	
CN957	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P	
CN958	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CN959	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
		< DIODE >	
D901	8-719-505-60	DIODE S5VB60	
D951	8-719-911-19	DIODE 1SS119	
D952	8-719-911-19	DIODE 1SS119	
D953	8-719-911-19	DIODE 1SS119	
D955	8-719-120-75	DIODE RD6.2ESL1	
D956	8-719-911-19	DIODE 1SS119	
D957	8-719-911-19	DIODE 1SS119	
D959	8-719-911-19	DIODE 1SS119	
D960	8-719-109-81	DIODE RD4.7ESB2	
D961	8-719-110-09	DIODE RD8.2ESB3	
D962	8-719-911-19	DIODE 1SS119	
		< FUSE >	
F901 ⚠•	1-532-299-00	FUSE, TIME-LAG (5A 250V)	
F902 ⚠•	1-532-066-00	FUSE, TIME-LAG (400mA 250V)	
F903 ⚠•	1-532-066-00	FUSE, TIME-LAG (400mA 250V)	
FH1	1-533-217-31	HOLDER, FUSE	
FH2	1-533-217-31	HOLDER, FUSE	
FH3	1-533-217-31	HOLDER, FUSE	
FH4	1-533-217-31	HOLDER, FUSE	
FH5	1-533-217-31	HOLDER, FUSE	
FH6	1-533-217-31	HOLDER, FUSE	
		< FILTER >	
FL901 ⚠•	1-424-150-11	TRANSFORMER, LINE FILTER	
		< IC >	
IC951	8-759-996-77	IC BA3924	
		< INLET >	
PL901 ⚠•	1-526-838-11	INLET, AC 2P	
		< IC LINK >	
PS901 ⚠•	1-532-727-11	LINK, IC 0.25A	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

POWER SUPPLY | MD | MIC | SPEAKER | STEREO LED | SWITCH

Ref.No.	Part No.	Description				Remark
		< TRANSISTOR >				
Q951	8-729-924-92	TRANSISTOR 2SB1370-E				
Q952	8-729-809-03	TRANSISTOR 2SC4363				
Q953	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q954	8-729-801-84	TRANSISTOR 2SB1013-4				
Q955	8-729-904-36	TRANSISTOR DTC114YS				
Q957	8-729-905-67	TRANSISTOR 2SD1944-K				
Q958	8-729-904-36	TRANSISTOR DTC114YS				
Q959	8-729-904-36	TRANSISTOR DTC114YS				
Q961	8-729-904-34	TRANSISTOR DTA114TS				
Q962	8-729-809-03	TRANSISTOR 2SC4363				
Q963	8-729-140-96	TRANSISTOR 2SD774-34				
Q964	8-729-900-36	TRANSISTOR DTC124ES				
		< RESISTOR >				
R951 ⚠	1-212-934-00	FUSIBLE	1	5%	1/2W	F
R952	1-249-437-11	CARBON	47K	5%	1/4W	
R953	1-249-405-11	CARBON	100	5%	1/4W	
R954 ⚠	1-249-409-11	CARBON	220	5%	1/4W	F
R955 ⚠	1-217-637-00	FUSIBLE	1	5%	1/4W	F
R956 ⚠	1-247-747-11	CARBON	470	5%	1/2W	F
R958	1-249-409-11	CARBON	220	5%	1/4W	
R961	1-249-423-11	CARBON	3.3K	5%	1/4W	
R962	1-249-429-11	CARBON	10K	5%	1/4W	
R964	1-249-429-11	CARBON	10K	5%	1/4W	
R965	1-247-891-00	CARBON	330K	5%	1/4W	
R966	1-249-417-11	CARBON	1K	5%	1/4W	
R967	1-247-891-00	CARBON	330K	5%	1/4W	
R974	1-249-417-11	CARBON	1K	5%	1/4W	
R975	1-247-895-00	CARBON	470K	5%	1/4W	
R976	1-249-415-11	CARBON	680	5%	1/4W	
		< TRANSFORMER >				
T901 ⚠	1-450-207-11	TRANSFORMER, POWER				
		< SWITCH >				
VS901 ⚠	1-526-576-51	SELECTOR, POWER VOLTAGE (VOLTAGE SELECTOR)				
**********						
*	1-630-400-21	MD BOARD				
		********				
		< CONNECTOR >				
CN601 *	1-564-723-11	PIN, CONNECTOR (SMALL TYPE) 7P				
CN602 *	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P				

Ref.No.	Part No.	Description	Remark
		< SWITCH >	
S601	1-571-330-21	SWITCH, LEAF (POWER)	
S602	1-571-331-21	SWITCH, LEAF (PLAY)	
S603	1-572-616-11	SWITCH, PUSH (1 KEY) (FAST WINDING)	
**********			
*	1-636-985-11	MICROPHONE BOARD	
		**********	
		< JACK >	
J601	1-565-559-11	JACK (MIC 1)	
J602	1-565-559-11	JACK (MIC 2/INSTRUMENT)	
**********			
*	1-636-983-11	SPEAKER BOARD	
		**********	
		< CONNECTOR >	
CN391 *	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P	
CN392 *	1-564-720-61	PIN, CONNECTOR (SMALL TYPE) 4P	
**********			
*	1-634-693-11	STEREO LED BOARD	
		**********	
		< DIODE >	
D11	8-719-921-01	LED EBR5534S	
		< CONNECTOR >	
CN11 *	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
**********			
*	1-630-864-11	SWITCH BOARD	
		**********	
		< CONNECTOR >	
CN603 *	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P	
		< SWITCH >	
S605	1-571-330-21	SWITCH, LEAF (POWER)	
S606	1-571-890-11	SWITCH, LEAF (PLAY) (FF/REW) (HIGH SPEED)	
S607	1-571-890-11	SWITCH, LEAF (PLAY) (FF/REW) (HIGH SPEED)	
S608	1-571-890-11	SWITCH, LEAF (PLAY) (FF/REW) (HIGH SPEED)	
**********			

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
*	A-3261-332-A	TC BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-287-31	CERAMIC	270PF	10%	50V
C102	1-162-287-31	CERAMIC	270PF	10%	50V
C103	1-124-927-11	ELECT	4.7uF	20%	100V
C104	1-162-292-31	CERAMIC	680PF	10%	50V
C105	1-124-927-11	ELECT	4.7uF	20%	100V
C106	1-124-477-11	ELECT	47uF	20%	25V
C107	1-130-483-00	MYLAR	0.01uF	5%	50V
C108	1-124-791-11	ELECT	1.0uF	20%	100V
C109	1-162-285-31	CERAMIC	180PF	10%	50V
C110	1-162-293-31	CERAMIC	820PF	10%	50V
C111	1-162-286-31	CERAMIC	220PF	10%	50V
C125	1-124-791-11	ELECT	1.0uF	20%	100V
C126	1-124-791-11	ELECT	1.0uF	20%	100V
C127	1-162-282-31	CERAMIC	100PF	10%	50V
C128	1-124-791-11	ELECT	1.0uF	20%	100V
C129	1-162-282-31	CERAMIC	100PF	10%	50V
C132	1-124-791-11	ELECT	1.0uF	20%	100V
C201	1-162-287-31	CERAMIC	270PF	10%	50V
C202	1-162-287-31	CERAMIC	270PF	10%	50V
C203	1-124-927-11	ELECT	4.7uF	20%	100V
C204	1-162-292-31	CERAMIC	680PF	10%	50V
C205	1-124-927-11	ELECT	4.7uF	20%	100V
C206	1-124-477-11	ELECT	47uF	20%	25V
C207	1-130-483-00	MYLAR	0.01uF	5%	50V
C208	1-124-791-11	ELECT	1.0uF	20%	100V
C209	1-162-285-31	CERAMIC	180PF	10%	50V
C210	1-162-293-31	CERAMIC	820PF	10%	50V
C211	1-162-286-31	CERAMIC	220PF	10%	50V
C225	1-124-791-11	ELECT	1.0uF	20%	100V
C226	1-124-791-11	ELECT	1.0uF	20%	100V
C227	1-162-282-31	CERAMIC	100PF	10%	50V
C228	1-124-791-11	ELECT	1.0uF	20%	100V
C229	1-162-282-31	CERAMIC	100PF	10%	50V
C232	1-124-791-11	ELECT	1.0uF	20%	100V
C301	1-123-875-11	ELECT	10uF	20%	50V
C302	1-124-443-00	ELECT	100uF	20%	10V
C303	1-124-902-00	ELECT	0.47uF	20%	50V
C304	1-124-927-11	ELECT	4.7uF	20%	100V
C305	1-124-477-11	ELECT	47uF	20%	25V
C306	1-124-927-11	ELECT	4.7uF	20%	100V
C307	1-124-443-00	ELECT	100uF	20%	10V
C308	1-124-443-00	ELECT	100uF	20%	10V
C309	1-130-482-00	MYLAR	0.0082uF	5%	50V
C310	1-130-481-00	MYLAR	0.0068uF	5%	50V
C311	1-130-481-00	MYLAR	0.0068uF	5%	50V

Ref. No.	Part No.	Description			Remark
C312	1-124-443-00	ELECT	100uF	20%	10V
C314	1-124-477-11	ELECT	47uF	20%	25V
C315	1-124-443-00	ELECT	100uF	20%	10V
C325	1-162-282-31	CERAMIC	100PF	10%	50V
C326	1-124-902-00	ELECT	0.47uF	20%	50V
C327	1-124-902-00	ELECT	0.47uF	20%	50V
C329	1-123-875-11	ELECT	10uF	20%	50V
C330	1-123-875-11	ELECT	10uF	20%	50V
C331	1-124-443-00	ELECT	100uF	20%	10V
C332	1-124-927-11	ELECT	4.7uF	20%	100V
C333	1-124-443-00	ELECT	100uF	20%	10V
C334	1-124-443-00	ELECT	100uF	20%	10V
C335	1-136-171-00	FILM	0.33uF	5%	50V
C338	1-124-791-11	ELECT	1.0uF	20%	100V
C339	1-124-443-00	ELECT	100uF	20%	10V
C341	1-124-443-00	ELECT	100uF	20%	10V
C343	1-162-282-31	CERAMIC	100PF	10%	50V
C344	1-162-282-31	CERAMIC	100PF	10%	50V
C345	1-124-927-11	ELECT	4.7uF	20%	100V
C346	1-124-927-11	ELECT	4.7uF	20%	100V
C350	1-123-875-11	ELECT	10uF	20%	50V
C401	1-124-791-11	ELECT	1.0uF	20%	100V
C402	1-124-791-11	ELECT	1.0uF	20%	100V
C403	1-124-927-11	ELECT	4.7uF	20%	100V
C404	1-123-875-11	ELECT	10uF	20%	50V
C405	1-131-343-00	TANTALUM	0.22uF	10%	35V
C406	1-124-443-00	ELECT	100uF	20%	10V
C408	1-124-443-00	ELECT	100uF	20%	10V
		< CONNECTOR >			
CN301	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN302	* 1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CN303	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN304	* 1-564-711-11	PIN, CONNECTOR (SMALL TYPE) 9P			
CN305	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN306	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN307	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CN308	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN309	* 1-564-706-61	PIN, CONNECTOR (SMALL TYPE) 4P			
CN310	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CN311	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN312	* 1-560-456-00	PIN, CONNECTOR 2P			
		< DIODE >			
D301	8-719-911-19	DIODE 1SS119			
D302	8-719-911-19	DIODE 1SS119			
D303	8-719-911-19	DIODE 1SS119			
D304	8-719-911-19	DIODE 1SS119			
D305	8-719-911-19	DIODE 1SS119			

TC

Ref. No.	Part No.	Description	Remark
D306	8-719-911-19	DIODE 1SS119	
D307	8-719-911-19	DIODE 1SS119	
D308	8-719-911-19	DIODE 1SS119	
D310	8-719-911-19	DIODE 1SS119	
D311	8-719-911-19	DIODE 1SS119	
D312	8-719-911-19	DIODE 1SS119	
D313	8-719-911-19	DIODE 1SS119	
D401	8-719-911-19	DIODE 1SS119	
D402	8-719-911-19	DIODE 1SS119	
		< IC >	
IC301	8-752-053-17	IC CXA1114P	
IC303	8-752-038-00	IC CXA1298AP	
IC304	8-759-143-54	IC uPC1330HA	
IC401	8-759-933-22	IC BA3707	
		< COIL >	
L101	1-410-776-11	INDUCTOR 12mH	
L201	1-410-776-11	INDUCTOR 12mH	
L301	1-408-092-00	INDUCTOR 330uH	
		< TRANSISTOR >	
Q101	8-729-900-74	TRANSISTOR DTC143TS	
Q105	8-729-921-65	TRANSISTOR DTC143ES	
Q201	8-729-900-74	TRANSISTOR DTC143TS	
Q205	8-729-921-65	TRANSISTOR DTC143ES	
Q301	8-729-900-89	TRANSISTOR DTC144ES	
Q303	8-729-800-34	TRANSISTOR 2SC3070	
Q305	8-729-116-57	TRANSISTOR 2SB1068-K	
Q306	8-729-900-89	TRANSISTOR DTC144ES	
Q307	8-729-806-30	TRANSISTOR 2SC4048	
Q309	8-729-900-74	TRANSISTOR DTC143TS	
Q310	8-729-205-83	TRANSISTOR 2SC2458L-GR	
Q311	8-729-806-30	TRANSISTOR 2SC4048	
Q312	8-729-900-74	TRANSISTOR DTC143TS	
Q313	8-729-115-30	TRANSISTOR 2SK105A-30	
Q314	8-729-900-89	TRANSISTOR DTC144ES	
Q315	8-729-806-30	TRANSISTOR 2SC4048	
Q316	8-729-900-74	TRANSISTOR DTC143TS	
Q317	8-729-900-89	TRANSISTOR DTC144ES	
Q318	8-729-115-30	TRANSISTOR 2SK105A-30	
Q319	8-729-900-89	TRANSISTOR DTC144ES	
Q320	8-729-806-30	TRANSISTOR 2SC4048	
Q323	8-729-116-57	TRANSISTOR 2SB1068-K	
Q324	8-729-925-16	TRANSISTOR 2SC1740SLN-RS	

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R101	1-247-893-11	CARBON	390K	5%	1/4W
R102	1-249-417-11	CARBON	1K	5%	1/4W
R103	1-249-417-11	CARBON	1K	5%	1/4W
R104	1-247-893-11	CARBON	390K	5%	1/4W
R105	1-249-407-11	CARBON	150	5%	1/4W
R106	1-249-430-11	CARBON	12K	5%	1/4W
R107	1-249-432-11	CARBON	18K	5%	1/4W
R108	1-249-421-11	CARBON	2.2K	5%	1/4W
R109	1-249-401-11	CARBON	47	5%	1/4W
R110	1-249-440-11	CARBON	82K	5%	1/4W
R111	1-249-429-11	CARBON	10K	5%	1/4W
R112	1-249-421-11	CARBON	2.2K	5%	1/4W
R120	1-249-425-11	CARBON	4.7K	5%	1/4W
R122	1-249-405-11	CARBON	100	5%	1/4W
R124	1-249-431-11	CARBON	15K	5%	1/4W
R201	1-247-893-11	CARBON	390K	5%	1/4W
R202	1-249-417-11	CARBON	1K	5%	1/4W
R203	1-249-417-11	CARBON	1K	5%	1/4W
R204	1-247-893-11	CARBON	390K	5%	1/4W
R205	1-249-407-11	CARBON	150	5%	1/4W
R206	1-249-430-11	CARBON	12K	5%	1/4W
R207	1-249-432-11	CARBON	18K	5%	1/4W
R208	1-249-421-11	CARBON	2.2K	5%	1/4W
R209	1-249-401-11	CARBON	47	5%	1/4W
R210	1-249-440-11	CARBON	82K	5%	1/4W
R211	1-249-429-11	CARBON	10K	5%	1/4W
R212	1-249-421-11	CARBON	2.2K	5%	1/4W
R220	1-249-425-11	CARBON	4.7K	5%	1/4W
R222	1-249-405-11	CARBON	100	5%	1/4W
R224	1-249-431-11	CARBON	15K	5%	1/4W
R301	1-249-429-11	CARBON	10K	5%	1/4W
R302	1-249-417-11	CARBON	1K	5%	1/4W
R303	1-249-405-11	CARBON	100	5%	1/4W
R304	1-249-441-11	CARBON	100K	5%	1/4W
R305	1-249-441-11	CARBON	100K	5%	1/4W
R308	1-249-441-11	CARBON	100K	5%	1/4W
R309	1-249-429-11	CARBON	10K	5%	1/4W
R310	1-249-429-11	CARBON	10K	5%	1/4W
R312	1-249-426-11	CARBON	5.6K	5%	1/4W
R313	1-249-405-11	CARBON	100	5%	1/4W
R314	1-249-423-11	CARBON	3.3K	5%	1/4W
R315	1-249-427-11	CARBON	6.8K	5%	1/4W
R316	1-249-401-11	CARBON	47	5%	1/4W
R317	1-247-778-00	CARBON	6.2	5%	1/4W
R318	1-249-393-11	CARBON	10	5%	1/4W

TC TUNER

Ref. No.	Part No.	Description			Remark
R320	1-249-441-11	CARBON	100K	5% 1/4W	
R321	1-249-417-11	CARBON	1K	5% 1/4W	
R322 ⚠	1-217-641-00	FUSIBLE	4.7	5% 1/4W	F
R323	1-249-438-11	CARBON	56K	5% 1/4W	
R336	1-249-405-11	CARBON	100	5% 1/4W	
R337	1-249-405-11	CARBON	100	5% 1/4W	
R338	1-249-425-11	CARBON	4.7K	5% 1/4W	
R339	1-249-405-11	CARBON	100	5% 1/4W	
R340	1-249-434-11	CARBON	27K	5% 1/4W	
R342	1-249-439-11	CARBON	68K	5% 1/4W	
R343	1-249-439-11	CARBON	68K	5% 1/4W	
R344	1-247-864-11	CARBON	24K	5% 1/4W	
R345	1-249-432-11	CARBON	18K	5% 1/4W	
R347	1-249-435-11	CARBON	33K	5% 1/4W	
R348	1-249-434-11	CARBON	27K	5% 1/4W	
R350	1-249-419-11	CARBON	1.5K	5% 1/4W	
R351	1-247-887-00	CARBON	220K	5% 1/4W	
R352	1-249-429-11	CARBON	10K	5% 1/4W	
R353	1-249-416-11	CARBON	820	5% 1/4W	
R356	1-249-417-11	CARBON	1K	5% 1/4W	
R357	1-249-429-11	CARBON	10K	5% 1/4W	
R358	1-249-431-11	CARBON	15K	5% 1/4W	
R359	1-249-437-11	CARBON	47K	5% 1/4W	
R360	1-249-425-11	CARBON	4.7K	5% 1/4W	
R361	1-247-828-11	CARBON	750	5% 1/4W	
R362	1-249-421-11	CARBON	2.2K	5% 1/4W	
R363	1-249-437-11	CARBON	47K	5% 1/4W	
R364	1-249-425-11	CARBON	4.7K	5% 1/4W	
R365	1-249-429-11	CARBON	10K	5% 1/4W	
R370	1-249-409-11	CARBON	220	5% 1/4W	
R371	1-249-409-11	CARBON	220	5% 1/4W	
R372	1-249-417-11	CARBON	1K	5% 1/4W	
R373	1-249-417-11	CARBON	1K	5% 1/4W	
R380	1-249-440-11	CARBON	82K	5% 1/4W	
R381	1-249-429-11	CARBON	10K	5% 1/4W	
R382	1-249-433-11	CARBON	22K	5% 1/4W	
R383	1-249-417-11	CARBON	1K	5% 1/4W	
R384	1-249-441-11	CARBON	100K	5% 1/4W	
R401	1-249-432-11	CARBON	18K	5% 1/4W	
R402	1-249-437-11	CARBON	47K	5% 1/4W	
R403	1-247-893-11	CARBON	390K	5% 1/4W	
R404	1-249-429-11	CARBON	10K	5% 1/4W	
R405	1-249-441-11	CARBON	100K	5% 1/4W	
R406	1-247-899-11	CARBON	680K	5% 1/4W	
R407	1-249-398-11	CARBON	27	5% 1/4W	
R408	1-249-401-11	CARBON	47	5% 1/4W	
R409	1-249-413-11	CARBON	470	5% 1/4W	

Ref. No.	Part No.	Description			Remark
		< VARIABLE RESISTOR >			
RV103	1-241-372-21	RES, ADJ, CARBON 100K			
RV203	1-241-372-21	RES, ADJ, CARBON 100K			
RV301	1-241-370-21	RES, ADJ, CARBON 2.2K			
RV302	1-241-371-21	RES, ADJ, CARBON 4.7K			
RV303	1-241-370-21	RES, ADJ, CARBON 2.2K			
RV304	1-241-371-21	RES, ADJ, CARBON 4.7K			
		< SWITCH >			
S301	1-572-617-11	SWITCH, PUSH (1 KEY) (RECORD/PLAYBACK)			
S302	1-570-822-21	SWITCH, LEAF (FWD/REV)			
		< TRANSFORMER >			
T301	1-433-325-11	TRANSFORMER, BIAS OSCILLATION			
**********					
*	A-3266-619-A	TUNER BOARD, COMPLETE			
		**********			
	4-936-062-01	DRUM, TUNING CAPACITOR			
	4-937-003-01	KNOB (BAND)			
	7-621-770-87	SCREW +P 2.6X5			
		< CAPACITOR >			
C1	1-162-286-31	CERAMIC	220PF	10% 50V	
C2	1-164-096-11	CERAMIC	0.01uF	50V	
C3	1-162-843-11	CERAMIC	0.022uF	10% 16V	
C4	1-123-875-11	ELECT	10uF	20% 50V	
C5	1-162-843-11	CERAMIC	0.022uF	10% 16V	
C6	1-164-036-11	CERAMIC	1PF	0.25PF 50V	
C7	1-164-027-11	CERAMIC	22PF	5% 50V	
C8	1-162-202-31	CERAMIC	13PF	5% 50V	
C9	1-101-997-11	CERAMIC	5PF	0.5PF 50V	
C10	1-162-193-31	CERAMIC	3.3PF	10% 50V	
C11	1-164-096-11	CERAMIC	0.01uF	50V	
C12	1-162-282-31	CERAMIC	100PF	10% 50V	
C13	1-164-096-11	CERAMIC	0.01uF	50V	
C15	1-124-791-11	ELECT	1.0uF	20% 100V	
C16	1-124-927-11	ELECT	4.7uF	20% 100V	
C17	1-124-126-00	ELECT	47uF	20% 10V	
C18	1-124-126-00	ELECT	47uF	20% 10V	
C19	1-164-096-11	CERAMIC	0.01uF	50V	
C20	1-124-791-11	ELECT	1.0uF	20% 100V	
C21	1-124-925-11	ELECT	2.2uF	20% 100V	
C22	1-124-443-00	ELECT	100uF	20% 10V	
C23	1-124-902-00	ELECT	0.47uF	20% 50V	
C24	1-124-927-11	ELECT	4.7uF	20% 100V	
C25	1-124-463-00	ELECT	0.1uF	20% 50V	
C26	1-164-062-11	CERAMIC	47PF	5% 50V	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

TUNER

Ref. No.	Part No.	Description			Remark
C27	1-164-096-11	CERAMIC	0.01uF		50V
C28	1-164-096-11	CERAMIC	0.01uF		50V
C29	1-164-096-11	CERAMIC	0.01uF		50V
C30	1-164-096-11	CERAMIC	0.01uF		50V
C31	1-164-096-11	CERAMIC	0.01uF		50V
C32	1-164-096-11	CERAMIC	0.01uF		50V
C33	1-123-382-00	ELECT	3.3uF	20%	100V
C34	1-124-927-11	ELECT	4.7uF	20%	100V
C35	1-124-234-00	ELECT	22uF	20%	16V
C36	1-124-234-00	ELECT	22uF	20%	16V
C37	1-124-234-00	ELECT	22uF	20%	16V
C38	1-124-234-00	ELECT	22uF	20%	16V
C39	1-162-217-31	CERAMIC	56PF	5%	50V
C40	1-162-282-31	CERAMIC	100PF	10%	50V
C51	1-164-096-11	CERAMIC	0.01uF		50V
C52	1-123-875-11	ELECT	10uF	20%	50V
C53	1-164-066-11	CERAMIC	68PF	5%	50V
C54	1-161-046-00	CERAMIC	0.0039uF	10%	50V
C55	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C56	1-124-791-11	ELECT	1.0uF	20%	100V
C57	1-123-875-11	ELECT	10uF	20%	50V
C59	1-124-463-00	ELECT	0.1uF	20%	50V
C75	1-162-840-11	CERAMIC	0.012uF	10%	16V
C76	1-162-840-11	CERAMIC	0.012uF	10%	16V
C77	1-124-463-00	ELECT	0.1uF	20%	50V
C78	1-124-463-00	ELECT	0.1uF	20%	50V
		< FILTER >			
CF1	1-577-327-81	FILTER, CERAMIC			
CF2	1-577-327-81	FILTER, CERAMIC			
CF3	1-577-327-81	FILTER, CERAMIC			
		< CONNECTOR >			
CN21	* 1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
		< TRIMMER >			
CT1-4 CT1-4	1-151-638-11	CAP, VARIABLE			
		< DIODE >			
D1	8-719-911-19	DIODE 1SS119			
D4	8-719-911-19	DIODE 1SS119			
D5	8-719-911-19	DIODE 1SS119			
D6	8-719-911-19	DIODE 1SS119			
D8	8-719-911-19	DIODE 1SS119			
D9	8-719-911-19	DIODE 1SS119			
D10	8-719-911-19	DIODE 1SS119			
D51	8-719-911-19	DIODE 1SS119			

Ref. No.	Part No.	Description			Remark
		< FILTER >			
FL1	1-236-086-11	FILTER, BAND PASS			
FL2	1-236-079-11	ENCAPSULATED COMPONENT			
		< IC >			
IC1	8-752-050-20	IC CXA1238S			
IC2	8-759-230-12	IC TA8118S			
		< COIL >			
L1	1-422-317-31	COIL, VHF			
L2	1-459-836-11	COIL (WITH CORE) (VHF)			
L3	1-402-158-11	ANTENNA, FERRITE-ROD (MW)			
L4	1-406-040-00	COIL (OSC)			
L6	* 1-401-495-11	LOADING ANTENNA COIL			
L51	1-410-521-11	INDUCTOR	100uH		
		< TRANSISTOR >			
Q1	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q2	8-729-904-39	TRANSISTOR DTC114TS			
Q3	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q7	8-729-904-36	TRANSISTOR DTC114YS			
Q8	8-729-904-36	TRANSISTOR DTC114YS			
Q9	8-729-900-74	TRANSISTOR DTC143TS			
Q10	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q11	8-729-904-36	TRANSISTOR DTC114YS			
		< RESISTOR >			
R1	1-249-427-11	CARBON	6.8K	5%	1/4W
R2	1-249-427-11	CARBON	6.8K	5%	1/4W
R3	1-249-425-11	CARBON	4.7K	5%	1/4W
R6	1-249-441-11	CARBON	100K	5%	1/4W
R7	1-249-415-11	CARBON	680	5%	1/4W
R9	1-249-441-11	CARBON	100K	5%	1/4W
R10	1-249-408-11	CARBON	180	5%	1/4W
R11	1-249-427-11	CARBON	6.8K	5%	1/4W
R12	1-249-427-11	CARBON	6.8K	5%	1/4W
R13	1-249-405-11	CARBON	100	5%	1/4W
R14	1-249-429-11	CARBON	10K	5%	1/4W
R15	1-247-887-00	CARBON	220K	5%	1/4W
R16	1-247-887-00	CARBON	220K	5%	1/4W
R17	1-249-421-11	CARBON	2.2K	5%	1/4W
R20	1-249-409-11	CARBON	220	5%	1/4W
R21	1-249-413-11	CARBON	470	5%	1/4W
R23	1-249-441-11	CARBON	100K	5%	1/4W
R24	1-249-425-11	CARBON	4.7K	5%	1/4W
R25	1-249-405-11	CARBON	100	5%	1/4W
R26	1-249-421-11	CARBON	2.2K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R27	1-249-441-11	CARBON	100K	5% 1/4W	
R28	1-249-441-11	CARBON	100K	5% 1/4W	
R29	1-249-429-11	CARBON	10K	5% 1/4W	
R30	1-249-409-11	CARBON	220	5% 1/4W	
R34	1-249-413-11	CARBON	470	5% 1/4W	
R35	1-249-438-11	CARBON	56K	5% 1/4W	
R36	1-249-403-11	CARBON	68	5% 1/4W	
R37	1-249-409-11	CARBON	220	5% 1/4W	
R38	1-249-411-11	CARBON	330	5% 1/4W	
R39	1-249-419-11	CARBON	1.5K	5% 1/4W	
R41	1-249-429-11	CARBON	10K	5% 1/4W	
R42	1-249-434-11	CARBON	27K	5% 1/4W	
R51	1-249-441-11	CARBON	100K	5% 1/4W	
R52	1-249-417-11	CARBON	1K	5% 1/4W	
R55	1-249-417-11	CARBON	1K	5% 1/4W	
		< VARIABLE RESISTOR >			
RV1	1-238-017-11	RES, ADJ, CARBON 22K			
RV51	1-238-016-11	RES, ADJ, CARBON 10K			
RV52	1-238-019-11	RES, ADJ, CARBON 47K			
		< SWITCH >			
S1	1-571-345-11	SWITCH, LEVER SLIDE (BAND)			
		< TRANSFORMER >			
T51	1-449-038-11	TRANSFORMER, DC-DC CONVERTER			
		< UNIT >			
TUP1	1-465-101-21	TUNER UNIT			
**********					
		MISCELLANEOUS			
		**********			
209 ⚠	8-848-137-11	DEVICE, OPTICAL KSS-210B			
ANT1	1-501-375-11	ANTENNA, TELESCOPIC			
CNJ311 *	1-562-646-11	SOCKET, CONNECTOR 4P			
F901 ⚠	1-532-299-00	FUSE, TIME-LAG (5A 250V)			
F902 ⚠	1-532-066-00	FUSE, TIME-LAG (400mA 250V)			
F903 ⚠	1-532-066-00	FUSE, TIME-LAG (400mA 250V)			
HP301	1-543-715-11	HEAD, MAGNETIC (REC/PB)			
HE301, HRP301	A-3114-079-A	HEAD ASSY, ROTARY(REC/PB)			
LCD801	1-808-973-11	DISPLAY PANEL, LIQUID CRYSTAL			
M601	1-541-630-11	MOTOR, DC			
M602	1-541-631-11	MOTOR, DC			
M702	1-541-352-11	MOTOR (SPINDLE)			
PM601	1-454-459-21	SOLENOID, PLUNGER			
S801	1-570-822-21	SWITCH, LEAF (OPEN/CLOSE)			
S802	1-571-936-11	SWITCH, LEAF (LIMIT)			
SP101	1-544-142-11	SPEAKER			
SP201	1-544-142-11	SPEAKER			
SP301	1-544-143-11	SPEAKER			
T901 ⚠	1-450-207-11	TRANSFORMER, POWER			
**********					

Ref. No.	Part No.	Description	Remark
		ACCESSORY & PACKING MATERIAL	
⚠	1-551-235-00	CODE, POWER (DK-51) 2P (E2)	
⚠	1-555-234-00	CODE, POWER (DK-52) 2P (E3)	
⚠	1-575-131-11	CODE, POWER (JE)	
⚠	1-569-007-11	ADAPTER, CONVERSION 2P (E2)	
⚠	1-569-008-11	ADAPTER, CONVERSION 2P (JE)	
*	3-364-128-01	INDIVIDUAL CARTON	
	3-752-462-11	MANUAL, INSTRUCTION (ENGLISH)	
	3-795-308-51	INSTRUCTION (E2)	
*	4-937-035-01	CUSHION (UPPER)	
*	4-937-036-01	CUSHION (LOWER)	
	8-812-019-90	MICROPHONE, DYNAMIC F-VJ20	

****

HARDWARE LIST

#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3
#2	7-621-770-XX	SCREW +BVTT 2.6X8 (S)
#3	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT
#4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3
#5	7-621-772-10	SCREW +B 2X4
#6	7-624-106-04	STOP RING 3.0, TYPE -E
#7	7-685-131-11	SCREW (DIA.2.6X4) (IT3B), TAPPING
#8	7-685-902-01	SCREW +PTPWH 2.6X5 (TYPE2)
#9	7-685-651-79	SCREW +BVTP 3X20 TYPE2 IT-3
#10	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3
#11	7-682-550-04	SCREW +B 3X12
#12	7-682-548-04	SCREW +P 3X8
#13	7-621-255-15	SCREW +P 2X3
#14	7-621-255-25	SCREW +P 2X4
#15	7-621-255-45	SCREW +PTT 2X6 (S)
#16	7-621-775-20	SCREW +B 2.6X5
#17	7-685-132-19	SCREW +P 2.6X5 TYPE2 NON-SLIT
#18	7-627-553-47	PRECISION SCREW +P 2X4 TYPE 3
#19	7-621-773-86	SCREW +P 2.6X4
#20	7-685-105-19	TPG +P 2X8, TYPE 2, NON-SLIT
#21	7-621-770-87	SCREW +P 2.6X5
#22	7-685-648-79	SCREW +BVTP 3×12 TYPE2 IT-3

E2: AC120V ZONE
E3: AC240V ZONE
JE: Tourist

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

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CFD-330

SONY
SERVICE MANUAL

E Model

SUPPLEMENT-1

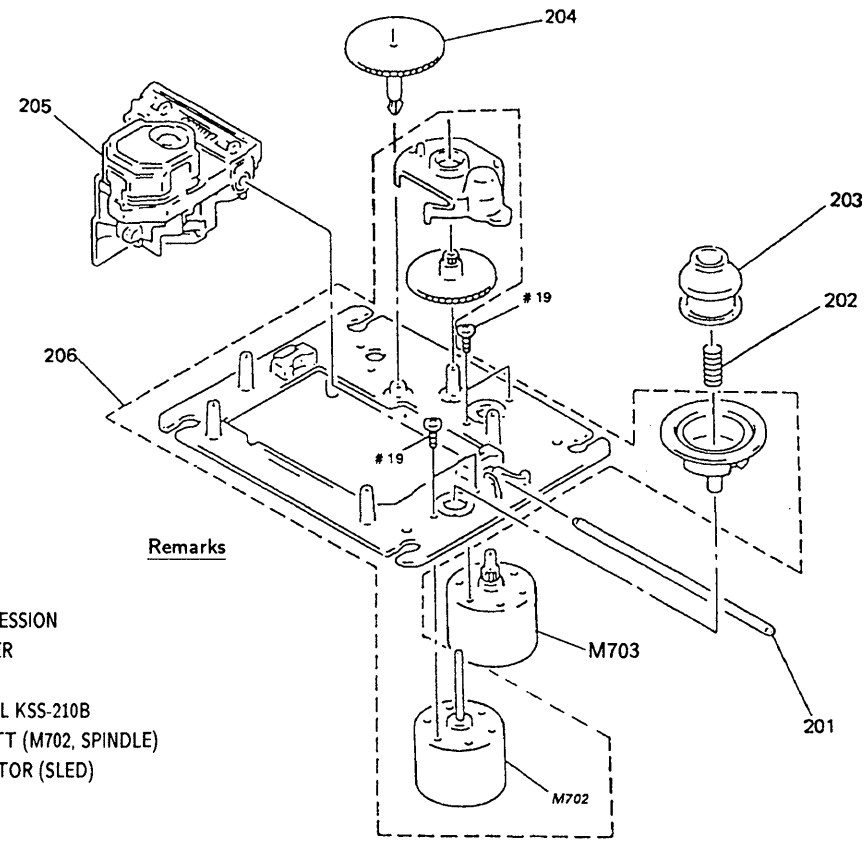
File this supplement with the service manual.

Subject : KSM-2101 BAN Optical Block Parts

The KSM-210 BAN and KSM-2101 BAN optical blocks were used in the CFD-330, but the Service Manual only shows the parts for KSM-210 BAN optical block. The type of optical block used in this model is marked on the optical block's chassis.

Refer to the following diagram for KSM-2101 BAN optical block parts :

OPTICAL BLOCK
(KSM-2101 BAN)



No.	Part No.	Description	Remarks
201	4-917-565-01	SHAFT, SLED	
202	2-625-191-01	SPRING, COMPRESSION	
203	2-625-186-01	RING (C), CENTER	
204	2-625-188-02	GEAR (A)	
205	⚠ 8-848-137-11	DEVICE, OPTICAL KSS-210B	
206	X-2625-133-1	CHASSIS ASSY, TT (M702, SPINDLE)	
M703	X-2625-132-1	GEAR ASSY, MOTOR (SLED)	
#19	7-621-255-15	SCREW +P 2×3	

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